NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT

Preliminary Findings Regarding a New Source Review and Renewal of a Part 70 Operating Permit

for Allison Transmission, Inc. - Speedway Main Campus in Marion County

Part 70 Operating Permit Renewal No.: T097-41349-00310
Significant Source Modification No.: 097-41322-00310

The Indiana Department of Environmental Management (IDEM) has received an application from Allison Transmission, Inc. - Speedway Main Campus, located at One Allison Way, Indianapolis, Indiana 46222, for a significant modification and renewal of its Part 70 Operating Permit issued on February 24, 2015. If approved by IDEM’s Office of Air Quality (OAQ), this proposed modification would allow Allison Transmission, Inc. - Speedway Main Campus to make certain changes at its existing source. Allison Transmission, Inc. - Speedway Main Campus has applied to add new test cell #45, Vehicle Environmental Testing (VET) facility, shot blast unit, identified as (SB1), and modify the existing test Cells 48N, 48S, 51N and 704.

The applicant intends to construct and operate new equipment that will emit air pollutants; therefore, the permit contains new or different permit conditions. In addition, some conditions from previously issued permits/approvals have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes (e.g. changes that add or modify synthetic minor emission limits). IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow the applicant to make this change.

A copy of the permit application and IDEM’s preliminary findings are available at:

Speedway Public Library
5633 W 25th St
Speedway, IN 46224

A copy of the preliminary findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

A copy of the preliminary findings is also available via IDEM’s Virtual File Cabinet (VFC.) Please go to: http://www.in.gov/idem/ and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria.

How can you participate in this process?

The date that this notice is posted on IDEM’s website (https://www.in.gov/idem/5474.htm) marks the beginning of a 30-day public comment period. If the 30th day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open.

You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the air pollution impact of this draft permit are received, with a request for a public hearing, IDEM will decide whether or not to hold a public hearing. IDEM could also decide to hold a public meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEM will make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing, you would have an opportunity to submit written comments and make verbal comments. At a meeting,
you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEM staff.

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM’s mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit number T097- 41349-00310 and SSM 097-41322-00310 in all correspondence.

Comments should be sent to:

Mehul Sura  
IDEM, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
(800) 451-6027, ask for Mehul Sura or (317) 233-6868  
Or dial directly: (317) 233-6868  
Fax: (317)-232-6749 attn: Mehul Sura  
E-mail: msura@IDEM.IN.gov

All comments will be considered by IDEM when we make a decision to issue or deny the permit. Comments that are most likely to affect final permit decisions are those based on the rules and laws governing this permitting process (326 IAC 2), air quality issues, and technical issues. IDEM does not have legal authority to regulate zoning, odor, or noise. For such issues, please contact your local officials.

For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: http://www.in.gov/ideem/airquality/2356.htm; and the Citizens’ Guide to IDEM on the Internet at: http://www.in.gov/ideem/6900.htm.

What will happen after IDEM makes a decision?

Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEM’s response to those comments. If you have submitted comments or have asked to(5,4),(996,990)
Part 70 Operating Permit Renewal with New Source Review (NSR)

OFFICE OF AIR QUALITY

Allison Transmission, Inc. - Speedway Main Campus
One Allison Way
Indianapolis, Indiana 46222

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

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</tr>
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<tbody>
<tr>
<td>Master Agency Interest ID: 11499</td>
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Issued by: Madhurima D. Moulik, Ph.D., Section Chief Permits Branch Office of Air Quality

Issuance Date: Expiration Date:

An Equal Opportunity Employer
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SECTION A  SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary transmission manufacturing plant.

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<th>One Allison Way, Indianapolis, Indiana 46222</th>
</tr>
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<td>General Source Phone Number:</td>
<td>317-242-2042</td>
</tr>
<tr>
<td>SIC Code:</td>
<td>3714 (Motor Vehicle Parts and Accessories)</td>
</tr>
<tr>
<td>County Location:</td>
<td>Marion County, Wayne Township</td>
</tr>
<tr>
<td>Source Location Status:</td>
<td>Nonattainment for SO2 standard</td>
</tr>
<tr>
<td>Source Status:</td>
<td>Part 70 Operating Permit Program</td>
</tr>
<tr>
<td>Major Source, under PSD and Emission Offset Rules</td>
<td></td>
</tr>
<tr>
<td>Minor Source, Section 112 of the Clean Air Act</td>
<td></td>
</tr>
<tr>
<td>Nested Source with fossil fuel fired boilers (or combinations thereof) totaling more than two hundred fifty million (250,000,000) British thermal units per hour heat input, as 1 of 28 Source Categories, within a non-listed source</td>
<td></td>
</tr>
</tbody>
</table>

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(14)]

This stationary source consists of the following emission units and pollution control devices:

(a) One (1) Union Iron Works Boiler, identified as emission unit BLR 4, capable of combusting only natural gas, with a maximum capacity of seventy two (72) million British thermal units (MMBtu) Btu per hour, exhausting out one stack identified as stack ID# 3107 and constructed in 1953.

(b) One (1) Union Iron Works Boiler, identified as emission unit BLR 5, capable of combusting only natural gas, with a maximum capacity of ninety six (96) million British thermal units (MMBtu) Btu per hour, exhausting out one stack identified as stack ID# 3108 and constructed in 1969.

(c) Emission Unit ETC consists of the following twenty five (25) engineering development transmission test cells; 701, 704, 705, 706, 707, 709, 710, 711, 712, 32N, 32S, 38N, 39N, 39S, 41N, 41S, 48N, 48S, 49N, 49S, 50N, 50S, 51N, 52N, 52S. The table below lists the fuel type and engine type that each cell is capable of accommodating based on the physical characteristics of each cell. Test cell 704 utilizes an oxidation catalyst system to control CO emissions.

<table>
<thead>
<tr>
<th>Test Cell ID</th>
<th>Construction Dates</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>Stack ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>701</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating or Gas Turbine</td>
<td>4000</td>
<td>PTE 057</td>
</tr>
<tr>
<td>704</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 065</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>705</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating or Gas Turbine</td>
<td>2400 for reciprocating; 4000 for gas turbine</td>
<td>PTE 067</td>
</tr>
<tr>
<td>706</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>4000</td>
<td>PTE 069</td>
</tr>
<tr>
<td>707</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 071</td>
</tr>
<tr>
<td>709</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 075</td>
</tr>
<tr>
<td>710</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 077</td>
</tr>
<tr>
<td>711</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 079</td>
</tr>
<tr>
<td>712</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 080</td>
</tr>
<tr>
<td>32N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 008</td>
</tr>
<tr>
<td>32S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 006</td>
</tr>
<tr>
<td>38N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>4000</td>
<td>PTE 011</td>
</tr>
<tr>
<td>39N</td>
<td>prior 1977 modified 1980's</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 018</td>
</tr>
<tr>
<td>39S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 020</td>
</tr>
<tr>
<td>41N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 023</td>
</tr>
<tr>
<td>41S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 021</td>
</tr>
<tr>
<td>48N</td>
<td>prior 1977 (approved in 2020 for modification)</td>
<td>Diesel, natural gas and gasoline</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 040</td>
</tr>
<tr>
<td>48S</td>
<td>prior 1977 (approved in 2020 for modification)</td>
<td>Diesel, natural gas and gasoline</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 041</td>
</tr>
<tr>
<td>49N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 086</td>
</tr>
<tr>
<td>49S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 087</td>
</tr>
<tr>
<td>50N</td>
<td>2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 700 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 093</td>
</tr>
<tr>
<td>50S</td>
<td>2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 1000 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 097</td>
</tr>
<tr>
<td>51N</td>
<td>prior 1977 (approved in 2020 for modification)</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>4000</td>
<td>PTE 084</td>
</tr>
<tr>
<td>52N</td>
<td>2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 700 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 098</td>
</tr>
<tr>
<td>52S</td>
<td>2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 1000 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 099</td>
</tr>
</tbody>
</table>
All of the engines except gas turbine engines located in Test Cells 701 and 705 are affected sources under 40 CFR 63, Subpart ZZZZ. Any gas turbine engines in test cells 701 and 705 are considered affected sources under 40 CFR 60, Subpart KKKK when a new turbine is installed in the test cell and a test cell exemption does not apply. The diesel reciprocating engines in each of the test cells are considered affected sources under 40 CFR 60, Subpart IIII when a new diesel engine is installed in the test cell and a test cell exemption does not apply. The gasoline reciprocating engines in test cells 50N, 50S, 52N, and 52S are considered an affected source under 40 CFR 60, Subpart JJJJ when a new gasoline engine is installed in the test cell and a test cell exemption does not apply.

(d) Emission unit DTC consists of the following four (4) transmission reliability test cells, TC-107, TC-109, TC-111 and TC-112. All test cells were constructed in 1985. The following engines can be used in any one of the individual test cells mentioned above:

<table>
<thead>
<tr>
<th>Test Cell ID</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>Stack ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC-107</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 045</td>
</tr>
<tr>
<td>TC-109</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 043</td>
</tr>
<tr>
<td>TC-111</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 049</td>
</tr>
<tr>
<td>TC-112</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 050</td>
</tr>
</tbody>
</table>

Under 40 CFR 63, Subpart ZZZZ, these engines are each an affected source. The engines in each of the test cells are considered affected sources under 40 CFR 60, Subpart IIII when a new engine is installed in the test cell and a test cell exemption does not apply.

(e) Emission unit PTS14 consists of the following four (4) transmission test stands, identified as test stand O-2, O-24, O-25 and O-31. Test stands O-2, O-24, O-25 and O-31 were constructed in 1978, 1979, 1986, 1986, and 1984 respectively. The table below lists the fuel type and engine type that each stand is capable of accommodating based on the physical characteristics of each stand. Test stands O-2, and O-31 each utilize an oxidation catalyst system to control CO emissions.

<table>
<thead>
<tr>
<th>Test Stand ID</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>Stack ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>O-2</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>14038</td>
</tr>
<tr>
<td>O-24</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>600</td>
<td>14024</td>
</tr>
<tr>
<td>O-25</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>600</td>
<td>14023</td>
</tr>
<tr>
<td>O-31</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>14045</td>
</tr>
</tbody>
</table>

Under 40 CFR 63, Subpart ZZZZ, these engines are each an affected source. The engines in each of the test stands are considered affected sources under 40 CFR 60, Subpart IIII when a new engine is installed in the test stand and a test cell exemption does not apply.

(f) Transmission Test Cell 702, identified as Emission Unit ID ETC702, consisting of one (1) reciprocating engine firing diesel fuel, with an estimated maximum engine size of 4000
hp, and exhausting at Stack/Vent IDs PTE062 and PTE062A. This emission unit can accommodate engines of greater than 600 horsepower. Constructed in 2002.

Under 40 CFR 63, Subpart ZZZZ, this operation is an affected source. The engine is considered an affected source under 40 CFR 60, Subpart IIII when a new engine is installed in the test cell and a test cell exemption does not apply.

(g) One (1) natural gas-fired boiler, identified as Emission Unit ID BLR6, constructed in 2011, with a maximum heat input of 99 million Btu per hour, equipped with low-NOx burners and flue gas recirculation.

Under 40 CFR 60, Subpart Dc, this operation is an affected source.

(h) Hydrochloric Acid Tanks in Plating Room

(i) Transmission Test Cell 55, identified as ETC55, permitted in 2013, consisting of two reciprocating diesel-fired engines, with an estimated maximum engine size of 4,000 hp each, exhausting to Stacks/Vents PTE93 and PTE94.

Under 40 CFR 63, Subpart ZZZZ, this operation is an affected source. The engine is considered an affected source under 40 CFR 60, Subpart IIII when a new engine is installed in the test cell and a test cell exemption does not apply.

(j) Transmission Test Cell 53, identified as ETC53, approved in 2015 for construction, consisting of two reciprocating engines (53N and 53S) firing low sulfur diesel fuel (150 ppm or less), with an estimated maximum engine size of equal to or less than 1000 HP each and exhausting to Stack/Vents PTE95 and PTE96.

Under 40 CFR 63, Subpart ZZZZ, this operation is an affected source. The engine is considered an affected source under 40 CFR 60 Subpart IIII when a new diesel engine is installed in the test cell and a test cell exemption does not apply.

(k) One (1) diesel-fired emergency generator, approved in 2016 for construction, identified as Genset 1a, with a maximum power output of 2,965 HP (22.76 MMBtu/hr input), using low sulfur diesel (150 ppm sulfur) equipped with a diesel particulate filter, exhausting to stack G1a. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ]

(l) One (1) diesel-fired emergency generator, approved in 2016 for construction, identified as Genset 1b, with a maximum power output of 2,965 HP (22.76 MMBtu/hr input), using low sulfur diesel (150 ppm sulfur) equipped with a diesel particulate filter, exhausting to stack G1b. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ]

(m) One (1) natural gas-fired boiler, identified as BLR 1, approved in 2018 for construction, with a maximum heat input capacity of 97.85 MMBtu/hr, equipped with low NOx Burner and flue gas recirculation system for NOx control and exhausting to stack #1.

Under 40 CFR 60, Subpart Dc, this boiler is an affected source.

(n) One (1) natural gas-fired boiler, identified as BLR 3, approved in 2018 for construction, with a maximum heat input capacity of 36.77 MMBtu/hr, equipped with low NOx Burner and flue gas recirculation system for NOx control and exhausting to stack #3.

Under 40 CFR 60, Subpart Dc, this boiler is an affected source.

(o) Three (3) natural gas-fired Boilers, identified as BLR 7, BLR 8 and BLR 9, respectively, approved in 2020 for construction, each capable of combusting only natural gas, with a
maximum capacity of 2.36, 2.36 and 1.5 MMbtu/hr, exhausting out to stacks R1, R2 and R3, respectively.

Under 40 CFR 60, Subpart Dc, these boilers are affected source.

(p) One (1) shot blast unit, identified as SB1, constructed in 2019, with a maximum shot usage rate of 450 pounds per hour, using coal fired boiler slag as shot media, using dust collector filters DC1 as control, and exhausting inside.

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]

This stationary source also includes the following insignificant activities as defined in 326 IAC 2-7-1(21):

(a) Space heaters, process heaters, or boilers using the following fuels:

1. Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.
2. Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.
3. Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.

(b) Fuel dispensing activities, including the following:

1. A gasoline fuel transfer and dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day, such and filling storage tanks having a storage capacity equal to or less than ten thousand five hundred (10,500) gallons. Such storage tanks may be in a fixed location or on mobile equipment; including:

   A) One (1) above ground storage tank, with a maximum storage capacity of 500 gallons.

   B) One (1) above ground storage tank, approved in 2017 for construction, with a maximum storage capacity of 10,000 gallons.

   Under 40 CFR 63, Subpart CCCCCC, this operation is an affected source.

2. A petroleum fuel, other than gasoline, dispensing facility having a storage capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per or less.

(c) The following VOC and HAP storage containers:

1. Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs less than twelve thousand (12,000) gallons.

2. Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

(d) Refractory storage not requiring air pollution control equipment.
(e) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.

(f) Machining where an aqueous cutting coolant continuously floods the machining interface.

(g) Cleaners and solvents, containing no VOCs and/or HAPS.

(h) The following equipment related to manufacturing activities not resulting in the emission of HAPs: soldering equipment, welding equipment.

(i) Closed loop heating and cooling systems.

(j) Solvent recycling systems with batch capacity less than or equal to 100 gallons.

(k) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.

(l) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs.

(m) Water based adhesives that are less than or equal to 5% by volume of VOCs excluding HAPs.

(n) Noncontact cooling tower systems with forced and induced draft cooling tower system not regulated under a NESHAP.

(o) Quenching operations used with heat treating processes.

(p) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(q) Heat exchanger cleaning and repair.

(r) Process vessel degassing and cleaning to prepare for internal repairs.

(s) Paved and unpaved roads and parking lots with public access

(t) Underground conveyors.

(u) Asbestos abatement projects regulated by 326 IAC 14-10.

(v) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.

(w) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.

(x) Blowdown for any of the following: boiler; compressors; pumps; and cooling tower.

(y) On-site fire and emergency response training approved by the department.
(z) Emergency diesel generators not exceeding 1600 horsepower.

(1) one (1) 1490 hp diesel emergency generator located in the Powerhouse courtyard.

(2) one (1) 490 hp diesel emergency generator located in Plant 7.

(3) one (1) 415 hp diesel emergency generator located in Plant 12/14.

Under 40 CFR 60, Subpart IIII, these operations are each an affected source. Under 40 CFR 63, Subpart ZZZZ, these operations are each an affected source.

(aa) One (1) diesel-fired emergency stationary fire pump engine, identified as Engine 1, constructed in 2012 and permitted in 2017, with a maximum heat input of 2.52 MMBtu/hr.

Under 40 CFR 63, Subpart ZZZZ, Engine 1 is considered an affected source. Under 40 CFR 60, Subpart IIII, Engine 1 is considered an affected facility.

(bb) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.

(1) Shot Blast controlled with fabric filters.

(cc) Purge double block and bleed valves.

(dd) Filter or coalescer media changeout.

(ee) A laboratory as defined in 326 IAC 2-7-1(21)(D).

(ff) Activities or categories of activities with individual HAP emissions not previously identified. Any unit emitting greater than 1 pound per day but less than 5 pounds per day or 1 ton per year of a single HAP.

(1) Production welding - manganese

(2) Hydrochloric Acid Tanks in Plating Room

(gg) Twenty-five (25) carburizing, atmosphere, heat treat furnaces, each using methanol (supplemented with methane as needed) at a maximum usage rate of 60 gallons per day to produce carbon monoxide and hydrogen rich atmosphere, each equipped with a natural gas-fired tube burner or with electric coils to produce process heat, each equipped with an integral natural gas-fired flame curtain to prevent ambient air from entering the furnace when the outer door is opened, and each equipped with an integral pilot burner located at the effluent of the heat treat furnace vestibule to combust flammable gases (carbon monoxide and hydrogen) in the furnace exhaust, as follows:

<table>
<thead>
<tr>
<th>Location</th>
<th>Unit ID</th>
<th>Construction Year</th>
<th>Natural Gas Maximum Heat Input Capacities (MMBtu/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant 14</td>
<td>EU 301194</td>
<td>1995</td>
<td>Tube Burner: 0.04</td>
</tr>
<tr>
<td>Plant 14</td>
<td>EU 301195</td>
<td>1995</td>
<td>Tube Burner: 0.04</td>
</tr>
<tr>
<td>Plant 14</td>
<td>EU 301196</td>
<td>1995</td>
<td>Tube Burner: 0.04</td>
</tr>
<tr>
<td>Plant 14</td>
<td>EU 301522</td>
<td>1995</td>
<td>Tube Burner: 0.04</td>
</tr>
<tr>
<td>Location</td>
<td>Unit ID</td>
<td>Construction Year</td>
<td>Natural Gas Maximum Heat Input Capacities (MMBtu/hr)</td>
</tr>
<tr>
<td>----------</td>
<td>-----------</td>
<td>-------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>Plant 14</td>
<td>EU 301523</td>
<td>1995</td>
<td>Tube: N/A*</td>
</tr>
<tr>
<td>Plant 6</td>
<td>EU 231548</td>
<td>1996</td>
<td>Flame: 0.88</td>
</tr>
<tr>
<td>Plant 6</td>
<td>EU 234909</td>
<td>1996</td>
<td>Curtain: 0.88</td>
</tr>
<tr>
<td>Plant 6</td>
<td>EU 234887</td>
<td>1998</td>
<td>Pilot Burner: 0.88</td>
</tr>
<tr>
<td>Plant 6</td>
<td>EU 234908</td>
<td>1998</td>
<td>Total: 0.88</td>
</tr>
<tr>
<td>Plant 6</td>
<td>EU 234910</td>
<td>1998</td>
<td></td>
</tr>
<tr>
<td>Plant 3</td>
<td>EU 245181</td>
<td>1998</td>
<td></td>
</tr>
<tr>
<td>Plant 3</td>
<td>EU 245182</td>
<td>1998</td>
<td></td>
</tr>
<tr>
<td>Plant 3</td>
<td>EU 245183</td>
<td>1998</td>
<td></td>
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<tr>
<td>Plant 3</td>
<td>EU 245184</td>
<td>1998</td>
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<tr>
<td>Plant 3</td>
<td>EU 245185</td>
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<td>Plant 3</td>
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<td>Plant 3</td>
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<td>Plant 3</td>
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<tr>
<td>Plant 3</td>
<td>EU 245189</td>
<td>1998</td>
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</tr>
<tr>
<td>Plant 12</td>
<td>EU100055736</td>
<td>2000</td>
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<td>Plant 12</td>
<td>EU 237012</td>
<td>2000</td>
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<tr>
<td>Plant 12</td>
<td>EU 237013</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>Plant 3</td>
<td>EU 611678</td>
<td>2003</td>
<td></td>
</tr>
<tr>
<td>Plant 12</td>
<td>EU 615955</td>
<td>2018</td>
<td></td>
</tr>
</tbody>
</table>

* N/A = not applicable, since these furnaces are heated with electric coils.

Each of the carburizing, atmosphere, heat treat furnaces is equipped with an oil quench tank to cool the metal parts after heat treatment, using mineral oil-based or refined petroleum oil-based quench oil. The potential to emit volatile organic compounds (VOC) and hazardous air pollutants (HAP) from the quench oil tanks are negligible due to the low vapor pressure of the quench oils used.

(hh) The following tanks involved in plating operations:

1. Three copper rod tanks (Dept. 1492 tanks A6, A7, A8)
2. One copper strike tank (Dept. 1492 tank A5)
3. Three (3) pickling (HCL) tanks (Dept. 1492 tanks A3, B1, B19)
4. One anodizing (H₂SO₄) tank (Dept. 1492 tank G3)
5. One manganese phosphate tank (Dept. 1492 tank F3)

Under 40 CFR 63, Subpart WWWWWW, this operation is an affected source.

6. One solution machining (HNO₃) tank (Dept. 1492 tank J6)
7. One (1) derusting tanks (Dept. 1492 tank E5)
8. Three copper strip tanks (Dept. 1492 tanks I9, I10, I11)

(ii) Two (2) maintenance paint booths.
(jj) One (1) soil and groundwater remediation system, identified as Emission Unit ENCORE, installed in 2003, consisting of:

1. Soil vapor extraction (SVE) system, located at Plant 12, including miscellaneous piping and:
   A. seventeen (17) soil vapor extraction wells;
   B. one (1) 90 gallon knock-out tank, and
   C. one (1) 30-horsepower blower rated at 750 standard cubic feet per minute (scfm), with emissions exhausting to one (1) stack identified as SVE vent.

2. Soil vapor extraction (SVE) system, located at Plant 14, including miscellaneous piping and:
   A. nine (9) soil vapor extraction wells;
   B. one (1) 117 gallon knock-out tank, and
   C. one (1) 10-horsepower blower rated at 300 standard cubic feet per minute (scfm), with emissions exhausting to one (1) stack identified as SVE vent.

3. Dense non-aqueous phase liquid (DNAPL)/groundwater recovery system, including miscellaneous piping, pumps and:
   A. up to twenty (20) recovery wells;
   B. one (1) DNAPL/water separator rated at 15 gpm, with emissions exhausting to one (1) stack identified as SVE vent;
   C. one (1) 875 gallon flow equalization tank, with emissions exhausting to one (1) stack identified as air stripper vent; and
   D. one (1) air stripper rated at sixty (60) gpm, with one (1) five (5) horsepower blower rated at 320 scfm with emissions exhausting to one (1) stack identified as air stripper vent.

(kk) One (1) paint booth, identified as PAINT98, approved in 2017 for construction, equipped with air atomization spray guns for metal coating, with a maximum coating usage of 720.0 gallons per year, using dry filters for overspray control, and exhausting at Stack/Vent 3046.

(ii) Eight (8) hot water spray washers used to wash parts before and after heat treatment, with each washer heated with steam or with electric coils, using an aqueous alkaline cleaning and rust preventative solution that does not contain volatile organic compounds (VOC) and hazardous air pollutants (HAP), as follows:

<table>
<thead>
<tr>
<th>Location</th>
<th>Unit ID</th>
<th>Construction Date</th>
<th>Exhaust</th>
<th>Heat Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant 4</td>
<td>245198</td>
<td>5/25/98</td>
<td>Stack**</td>
<td>Steam</td>
</tr>
<tr>
<td>Plant 4</td>
<td>245199</td>
<td>5/25/98</td>
<td>Stack**</td>
<td>Steam</td>
</tr>
<tr>
<td>Plant 6</td>
<td>100091973</td>
<td>10/13/2008</td>
<td>Stack**</td>
<td>Electric</td>
</tr>
<tr>
<td>Plant 6</td>
<td>100091972</td>
<td>08/22/2008</td>
<td>Stack**</td>
<td>Steam</td>
</tr>
<tr>
<td>Plant 6</td>
<td>245200</td>
<td>5/25/98</td>
<td>Stack**</td>
<td>Steam</td>
</tr>
<tr>
<td>Location</td>
<td>Unit ID</td>
<td>Construction Date</td>
<td>Exhaust</td>
<td>Heat Source</td>
</tr>
<tr>
<td>----------</td>
<td>---------</td>
<td>-------------------</td>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>Plant 12</td>
<td>615959</td>
<td>not known</td>
<td>Stack**</td>
<td>Electric</td>
</tr>
<tr>
<td>Plant 12</td>
<td>237018</td>
<td>08/23/2001</td>
<td>Stack**</td>
<td>Electric</td>
</tr>
<tr>
<td>Plant 14</td>
<td>300161</td>
<td>07/21/2003</td>
<td>Indoors</td>
<td>Electric</td>
</tr>
</tbody>
</table>

**The spray washer stack has not been assigned a stack ID number.

**Twenty (20) draw/temper furnaces used to complete the hardening process and drive off moisture, with each furnace heated with natural gas heaters, as follows:

<table>
<thead>
<tr>
<th>Location</th>
<th>Unit ID</th>
<th>Construction Date</th>
<th>Fuel Combusted</th>
<th>Maximum Fuel Heat Input Capacity (MMBtu/hr)</th>
<th>Exhaust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant 4</td>
<td>245194</td>
<td>1/2/1998</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 4</td>
<td>245195</td>
<td>1/2/1998</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 4</td>
<td>245196</td>
<td>1/2/1998</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 4</td>
<td>245197</td>
<td>5/25/1998</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 4</td>
<td>10010681</td>
<td>12/26/2005</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 4</td>
<td>246037</td>
<td>4/9/2002</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 4</td>
<td>10010682</td>
<td>12/26/2005</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 4</td>
<td>245190</td>
<td>1/2/1998</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 4</td>
<td>600677</td>
<td>Not available</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 6</td>
<td>234904</td>
<td>8/7/1998</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 6</td>
<td>231550</td>
<td>2/19/1998</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 6</td>
<td>231549</td>
<td>1/1/1995</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 6</td>
<td>234906</td>
<td>2/19/1996</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 6</td>
<td>234886</td>
<td>2/19/1998</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 12</td>
<td>615956</td>
<td>2017</td>
<td>Natural Gas</td>
<td>0.8</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 12</td>
<td>100055737</td>
<td>Not available</td>
<td>Natural Gas</td>
<td>0.35</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 12</td>
<td>237017</td>
<td>8/23/2001</td>
<td>Natural Gas</td>
<td>0.35</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 12</td>
<td>237016</td>
<td>8/23/2001</td>
<td>Natural Gas</td>
<td>0.35</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 12</td>
<td>237015</td>
<td>8/23/2001</td>
<td>Natural Gas</td>
<td>0.35</td>
<td>Stack*</td>
</tr>
</tbody>
</table>

*N/A = not applicable, since these furnaces are heated with electric coils.

*The draw/temper furnace stack has not been assigned a stack ID number.

**Five (5) draw/temper furnaces used to complete the hardening process and drive off moisture, with each furnace heated with electric coils, as follows:

<table>
<thead>
<tr>
<th>Location</th>
<th>Unit ID</th>
<th>Construction Date</th>
<th>Fuel Combusted</th>
<th>Maximum Fuel Heat Input Capacity (MMBtu/hr)</th>
<th>Exhaust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant 14</td>
<td>301191</td>
<td>11/28/1995</td>
<td>None (Electric)</td>
<td>N/A*</td>
<td>Inside</td>
</tr>
<tr>
<td>Plant 14</td>
<td>301192</td>
<td>11/28/1995</td>
<td>None (Electric)</td>
<td>N/A*</td>
<td>Inside</td>
</tr>
<tr>
<td>Plant 14</td>
<td>301193</td>
<td>11/28/1995</td>
<td>None (Electric)</td>
<td>N/A*</td>
<td>Inside</td>
</tr>
<tr>
<td>Plant 14</td>
<td>301524</td>
<td>11/28/1995</td>
<td>None (Electric)</td>
<td>N/A*</td>
<td>Inside</td>
</tr>
<tr>
<td>Plant 14</td>
<td>301525</td>
<td>11/28/1995</td>
<td>None (Electric)</td>
<td>N/A*</td>
<td>Inside</td>
</tr>
</tbody>
</table>

*N/A = not applicable, since these furnaces are heated with electric coils.
One (1) cooling tower, identified as CT1, consisting of 3 cells, approved in 2018 for construction, with a maximum water recirculation rate of 800 gallons per hour with maximum total dissolved solid content of 1,570 parts per million in the water, without control and exhausting outside.

Two (2) induced draft cooling tower, identified as VCT1 and VCT2, respectively, approved in 2020 for construction, each with a maximum water recirculation rate of 3000 gallons per minute with maximum total dissolved solid content of 24,000 parts per million in the water, without control and exhausting outside.

Three (3) natural gas-fired VET facility furnaces, identified as RZ1, RZ2 and RZ3, respectively, approved in year for construction in 2020, each with a maximum capacity of maximum capacity 0.4 MMBtu/hr, and venting outside.

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

This transmission manufacturing plant consists of six (6) plants, including Plant 3, Plant 4, Plant 6, Plant 12, Plant 14, and Plant 16, located at One Allison Way, Indianapolis, Indiana 46222.

The six (6) plants are located on contiguous or adjacent properties and have the same two digit SIC code and are still under common ownership. Therefore they are considered one (1) major source, as defined by 326 IAC 2-7-1(22).

This conclusion was initially determined under Part 70 Operating Permit T097-6898-00310 on June 21, 2004 and was updated under Significant Permit Modification 097-36010-00310, issued on October 21, 2016, to correct typographical errors and to incorporate an address change.
SECTION B  GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]
Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-7-5(2)][326 IAC 2-1.1-9.5][326 IAC 2-7-4(a)(1)(D)][IC 13-15-3-6(a)]
(a) This permit, T097-41349-00310, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]
Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-7-7][IC 13-17-12]
Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability [326 IAC 2-7-5(5)]
The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]
This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]
(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U.S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.
B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

1. it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(35), and

2. the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) A "responsible official" is defined at 326 IAC 2-7-1(35).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source’s compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region 5
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) The annual compliance certification report shall include the following:

1. The appropriate identification of each term or condition of this permit that is the basis of the certification;

2. The compliance status;

3. Whether compliance was continuous or intermittent;

4. The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and

5. Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.
The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)] [326 IAC 1-6-3]

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

1. Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
2. A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
3. Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

1. Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
2. A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
3. Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee’s control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.
The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(8) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

B.12 Permit Shield [326 IAC 2-7-15][326 IAC 2-7-20][326 IAC 2-7-12]

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to
be false, or in the exercise of reasonable care should have been known to be false, at the
time the information was submitted.

(d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including
the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to
or at the time of this permit’s issuance;

(3) The applicable requirements of the acid rain program, consistent with Section
408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section
114 of the Clean Air Act.

(e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2)
(Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading
based on State Implementation Plan (SIP) provisions).

(f) This permit shield is not applicable to modifications eligible for group processing until
after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM,
OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]

(a) All terms and conditions of permits established prior to T097-41349-00310 and issued
pursuant to permitting programs approved into the state implementation plan have been
either:

(1) incorporated as originally stated,

(2) revised under 326 IAC 2-7-10.5, or

(3) deleted under 326 IAC 2-7-10.5.

(b) Provided that all terms and conditions are accurately reflected in this permit, all previous
registrations and permits are superseded by this Part 70 operating permit.

B.14 Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]

The Permittee’s right to operate this source terminates with the expiration of this permit unless a
timely and complete renewal application is submitted at least nine (9) months prior to the date of
expiration of the source’s existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause.
The filing of a request by the Permittee for a Part 70 Operating Permit modification,
revocation and reissuance, or termination, or of a notification of planned changes or
anticipated noncompliance does not stay any condition of this permit.
[326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that
meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by
326 IAC 2-7-1(35).
(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

1. That this permit contains a material mistake.
2. That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
3. That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(42). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) A timely renewal application is one that is:

1. Submitted at least nine (9) months prior to the date of the expiration of this permit; and
2. If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source’s failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.
B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)][326 IAC 2-7-12(b)(2)]

(a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.19 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (c) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and
United States Environmental Protection Agency, Region 5  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee’s copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b)(1) and (c)(1). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1) and (c)(1).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(37)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;
(2) The date on which the change will occur;
(3) Any change in emissions; and
(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35).

(c) Emission Trades [326 IAC 2-7-20(c)]  
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ or U.S. EPA is required.

(e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Source Modification Requirement [326 IAC 2-7-10.5]  
A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.21 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]  
Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee’s right under all applicable laws and regulations to
assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee’s premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.
B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.
SECTION C  SOURCE OPERATION CONDITIONS

Emission Limitations and Standards  [326 IAC 2-7-5(1)]

C.1 Opacity  [326 IAC 5-1]
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.2 Open Burning  [326 IAC 4-1] [IC 13-17-9]
The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.3 Incineration  [326 IAC 4-2] [326 IAC 9-1-2]
The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.4 Fugitive Dust Emissions  [326 IAC 6-4]
The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.5 Stack Height  [326 IAC 1-7]
The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

C.6 Asbestos Abatement Projects  [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.
Testing Requirements [326 IAC 2-7-6(1)]

C.7  Performance Testing [326 IAC 2-7-6(1)]

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.8  Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

C.9  Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

(a) For new units:

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.

(b) For existing units:

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance to begin such monitoring. If, due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

C.10 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. The analog instrument shall be capable of measuring values outside of the normal range.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5][326 IAC 2-7-6]

C.11 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.12 Risk Management Plan [326 IAC 2-7-5(11)] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.13 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

1. initial inspection and evaluation;

2. recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

3. any necessary follow-up actions to return operation to normal or usual manner of operation.
(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Record Keeping and Reporting Requirements  [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.15 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(33) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
C.16 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2][326 IAC 2-3]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable:

(AA) All calibration and maintenance records.

(BB) All original strip chart recordings for continuous monitoring instrumentation.

(CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following, where applicable:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.

(BB) The dates analyses were performed.

(CC) The company or entity that performed the analyses.

(DD) The analytical techniques or methods used.

(EE) The results of such analyses.

(FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

(c) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A), 326 IAC 2-2-8 (b)(6)(B), 326 IAC 2-3-2 (I)(6)(A), and/or 326 IAC 2-3-2 (I)(6)(B)) that a "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, document and maintain the following records:

(A) A description of the project.

(B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.

(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

(i) Baseline actual emissions;

(ii) Projected actual emissions;

(iii) Amount of emissions excluded under section
326 IAC 2-2-1(pp)(2)(A)(iii) and/or 326 IAC 2-3-1 (kk)(2)(A)(iii); and

(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

(d) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)) that a "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

1. Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and

2. Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B - Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.
(e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (oo) and/or 326 IAC 2-3-1 (jj)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C - General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (ww) and/or 326 IAC 2-3-1 (pp), for that regulated NSR pollutant, and

(2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).

(f) The report for project at an existing emissions unit shall be submitted no later than sixty (60) days after the end of the year and contain the following:

(1) The name, address, and telephone number of the major stationary source.

(2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.

(3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).

(4) Any other information that the Permittee wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(g) If the Permittee is a member of IDEM's Environmental Stewardship Program (ESP), the Permittee may report in the manner below for any reporting requirement except Section B - Deviations from Permit Requirements, that allows reporting per this paragraph:

(1) Each report shall be submitted semiannually, covering the period from April 1 to September 30 or October 1 to March 31.

(2) Each report, shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(3) Each report shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(4) The Permittee shall use the attached Environmental Stewardship Program Reporting Forms or their equivalent.
(5) Each report shall be submitted to the address listed in paragraph (b) of this condition.

If the Permittee is removed from or withdraws from the ESP, the Permittee shall begin quarterly reporting according to paragraphs (a) through (e) of this condition and the condition(s) requiring the reporting. If the Permittee is removed from or withdraws from the ESP during the second quarter of a semi-annual period, the Permittee shall submit all reports for the first quarter of the period within thirty (30) days of the removal or withdrawal.

**Stratospheric Ozone Protection**

C.18 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.
SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Descriptions:

(a) One (1) Union Iron Works Boiler, identified as emission unit BLR 4, capable of combusting only natural gas, with a maximum capacity of seventy two (72) million British thermal units (MMBtu) Btu per hour, exhausting out one stack identified as stack ID# 3107 and constructed in 1953.

(b) One (1) Union Iron Works Boiler, identified as emission unit BLR 5, capable of combusting only natural gas, with a maximum capacity of ninety six (96) million British thermal units (MMBtu) Btu per hour, exhausting out one stack identified as stack ID# 3108 and constructed in 1969.

(The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Rules: Marion County [326 IAC 6.5-6-2(a)] [326 IAC 6.5-6-2(b)]

(a) Pursuant to 326 IAC 6.5-6-2(a), particulate (PM) emissions from emission units BLR 4 and BLR 5 shall not exceed:

1. 0.15 pounds per million Btu for each emission unit; and
2. 39.3 tons per year for all emission units combined.

(b) Pursuant to 326 IAC 6.5-6-2(b), compliance with the particulate (PM) emissions limit in Condition D.1.1(a) shall be determined at the end of each month based on the sum of the monthly calculated emissions for the most recent twelve (12) consecutive month period. The monthly emissions shall be calculated using AP-42 emissions factors or alternative emission factors approved by the Commissioner.

D.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.3 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.1(b), the Permittee shall maintain monthly fuel usage records for each boiler BLR 4 and BLR 5.

(b) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required to be maintained by this condition.

D.1.4 Reporting Requirements

(a) If the Permittee is a member of IDEM's Environmental Stewardship Program (ESP) program, a semi-annual summary of the information to document the compliance status with Condition D.1.1(b) shall be submitted using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days after the end of the semi-annual period being reported.

(b) If the Permittee is no longer a member of IDEM's Environmental Stewardship Program (ESP) program, a quarterly summary of the information to document the compliance status with Condition D.1.1(b) shall be submitted using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days after the end of the calendar quarter being reported.
(c) Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
### EMISSIONS UNIT OPERATION CONDITIONS

#### Emission Unit Descriptions:

(c) Emission Unit ETC consists of the following twenty six (26) engineering development transmission test cells: 701, 704, 705, 706, 707, 709, 710, 711, 712, 32N, 32S, 38N, 39N, 39S, 41N, 41S, 48N, 48S, 49N, 49S, 50N, 50S, 51N, 52N and 52S. The table below lists the fuel type and engine type that each cell is capable of accommodating based on the physical characteristics of each cell.

<table>
<thead>
<tr>
<th>Test Cell ID</th>
<th>Construction Dates</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>Stack ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>701</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating or Gas Turbine</td>
<td>4000</td>
<td>PTE 057</td>
</tr>
<tr>
<td>704</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 065</td>
</tr>
<tr>
<td>705</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating or Gas Turbine</td>
<td>2400 for reciprocating; 4000 for gas turbine</td>
<td>PTE 067</td>
</tr>
<tr>
<td>706</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>4000</td>
<td>PTE 069</td>
</tr>
<tr>
<td>707</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 071</td>
</tr>
<tr>
<td>709</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 075</td>
</tr>
<tr>
<td>710</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 077</td>
</tr>
<tr>
<td>711</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 079</td>
</tr>
<tr>
<td>712</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 080</td>
</tr>
<tr>
<td>32N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 008</td>
</tr>
<tr>
<td>32S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 006</td>
</tr>
<tr>
<td>38N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>4000</td>
<td>PTE 011</td>
</tr>
<tr>
<td>39N</td>
<td>prior 1977 (modified 1980's)</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 018</td>
</tr>
<tr>
<td>39S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 020</td>
</tr>
<tr>
<td>41N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 023</td>
</tr>
<tr>
<td>41S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 021</td>
</tr>
<tr>
<td>48N</td>
<td>prior 1977 (approved in 2020 for modification)</td>
<td>Diesel, Natural Gas, Gasoline</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 040</td>
</tr>
<tr>
<td>Engine Code</td>
<td>Type/Date/Mfg.</td>
<td>Fuel Type</td>
<td>Reciprocating</td>
<td>Power (HP)</td>
<td>PTE Code</td>
</tr>
<tr>
<td>------------</td>
<td>----------------</td>
<td>-----------</td>
<td>---------------</td>
<td>------------</td>
<td>----------</td>
</tr>
<tr>
<td>48S</td>
<td>prior 1977</td>
<td>Diesel, Natural Gas, Gasoline</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 041</td>
</tr>
<tr>
<td>49N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 086</td>
</tr>
<tr>
<td>49S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 087</td>
</tr>
<tr>
<td>50N</td>
<td>2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 700 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 093</td>
</tr>
<tr>
<td>50S</td>
<td>2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 1000 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 097</td>
</tr>
<tr>
<td>51N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>4000</td>
<td>PTE 084</td>
</tr>
<tr>
<td>52N</td>
<td>2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 700 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 098</td>
</tr>
<tr>
<td>52S</td>
<td>2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 1000 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 099</td>
</tr>
<tr>
<td>45</td>
<td>approved in 2020 for construction</td>
<td>diesel, natural gas, gasoline and propane</td>
<td>Reciprocating</td>
<td>4000</td>
<td>PTE 057</td>
</tr>
</tbody>
</table>

All of the engines except gas turbine engines located in Test Cells 701 and 705 are affected sources under 40 CFR 63, Subpart ZZZZ. Any gas turbine engines in test cells 701 and 705 are considered affected sources under 40 CFR 60, Subpart KKKK when a new turbine is installed in the test cell and a test cell exemption does not apply. The diesel reciprocating engines in each of the test cells are considered affected sources under 40 CFR 60, Subpart IIII when a new diesel engine is installed in the test cell and a test cell exemption does not apply. The gasoline reciprocating engines in test cells 50N, 50S, 52N, and 52S are considered an affected source under 40 CFR 60, Subpart JJJJ when a new gasoline engine is installed in the test cell and a test cell exemption does not apply.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.2.1 Particulate Matter Limitations Except Lake County [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate (PM) emissions from each of the twenty-six (26) Test Cells covered under Emissions Unit ETC shall not exceed three hundredths (0.03) grains per dry standard cubic foot of exhaust air.
D.2.2 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1]

Pursuant to 326 IAC 7-1.1-1 (SO2 Emissions Limitations), Sulfur Dioxide (SO2) emissions from Test Cells 701, 704, 705, 706, 707, 709, 711, 32N, 38N, 39N, 45 and 51N shall each not exceed five tenths (0.5) pounds per million Btu heat input.

D.2.3 PSD Minor Limit [326 IAC 2-2]

(a) In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to Test Cell 39N, the Permittee shall comply with the following:

1. NOx emissions from diesel fuel fired reciprocating engines utilized in Test Cell 39N shall be limited to less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

2. The input of diesel fuel to reciprocating engines utilized in Test Cell 39N shall be less than 182,481 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. For the purposes of determining compliance, each gallon of diesel fuel burned in reciprocating engines that are equal to or less than 600 horsepower shall be equivalent to one and thirty seven hundredths (1.378) gallons of diesel fuel burned in reciprocating engines that are greater than 600 horsepower.

Compliance with the above limits shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to Test Cell 39N.

(b) Pursuant to significant source modification 097-36831-00310, the Permittee shall comply with the following:

1. Combined VOC emissions from test cells 50N, 52N, 50S, and 52S shall be less than 40.0 tons per twelve consecutive month period, with compliance determined at the end of each month.

2. Combined NOx emissions from test cells 50N, 52N, 50S, and 52S shall be less than 40.0 tons per twelve consecutive month period, with compliance determined at the end of each month.

Compliance with the above emission limitations shall limit VOC and NOx emissions of test cells 50N, 52N, 50S, and 52S to less than 40 tons per twelve consecutive month period, each, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the 2016 modification for test cells 50N, 52N, 50S, and 52S.

D.2.4 PSD Minor Limits of PM, PM10, PM2.5, NOx, VOC and CO and Emission Offset Minor Limit of SO2 [326 IAC 2-2] [326 IAC 2-3]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-3 (Emission Offset) not applicable to Test Cells 45, 48N, 48S and 51N, the Permittee shall comply with the following:

(a) For each pollutant the diesel equivalent usage input shall be less than the stated value.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>diesel equivalent usage (gallons per twelve consecutive month period)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>1,378,691</td>
</tr>
<tr>
<td>VOC</td>
<td>9,888,979</td>
</tr>
<tr>
<td>CO</td>
<td>37,536,648</td>
</tr>
<tr>
<td>PM</td>
<td>74,263,780</td>
</tr>
<tr>
<td>PM10</td>
<td>46,215,352</td>
</tr>
</tbody>
</table>

Test Cell 45 diesel equivalent usage shall be based upon the total amount of fuel (natural gas, gasoline, propane, and diesel) combusted.

Test Cell 51 diesel equivalent usage shall be based upon the amount of diesel fuel consumed when testing an engine with rating greater than 1200 HP.

Test Cell 48N and 48S diesel equivalent usage shall be based upon the total amount of natural gas and gasoline combusted.

Diesel Fuel-Fired EPA Certified Engine - Diesel Equivalent Usage:

When testing a diesel-fired engine certified to meet an EPA emission factor, the diesel equivalent usage shall be computed based on the following formula:

\[ \text{FCe(Pollutant)} = \text{FC} \times \left( \frac{\text{EF}_{\text{ACTUAL}}}{\text{EF}_{\text{BENCHMARK}}} \right) \]

Where:

- \( \text{FCe(Pollutant)} \) = diesel equivalent usage (gallons) per pollutant as listed in D.2.4(a)
- \( \text{FC} \) = actual fuel use (gallons of diesel)
- \( \text{EF}_{\text{ACTUAL}} \) = EPA emission factor for engine tested (g/hp-hr)
- \( \text{EF}_{\text{BENCHMARK}} \) = EPA emission factor for engine tested (g/hp-hr)

\[
\begin{array}{c|c}
\text{EF}_{\text{BENCHMARK}} \ (\text{g/hp-hr}) & \text{Pollutant} \\
2.083 & \text{NOx} \\
0.14 & \text{VOC} \\
0.131 & \text{CO} \\
0.015 & \text{PM} \\
0.015 & \text{PM10} \\
0.015 & \text{PM2.5} \\
0.929 & \text{SO2} \\
\end{array}
\]

For an EPA Certified Engine, the actual emission factor \( \text{EF}_{\text{ACTUAL}} \) shall be the EPA emission factor the engine is certified to meet.

Natural Gas-Fired EPA Certified Engine - Diesel Equivalent Usage:

When testing a natural gas-fired engine certified to meet an EPA emission factor, the diesel equivalent usage shall be computed based on the following formula:

\[ \text{FCe} = \text{FC} \times 7299 \times \left( \frac{\text{EF}_{\text{ACTUAL}}}{\text{EF}_{\text{BENCHMARK}}} \right) \]

Where:

- \( \text{FCe(Pollutant)} \) = diesel equivalent usage (gallons) per pollutant as listed in D.2.4(a)
- \( \text{FC} \) = actual fuel use (mmscf of natural gas)
- \( 7299 \) = adjustment factor (gallon diesel/mmscf natural gas)
- \( \text{EF}_{\text{ACTUAL}} \) = EPA emission factor for engine tested (g/hp-hr)

\[
\begin{array}{c|c}
\text{EF}_{\text{BENCHMARK}} \ (\text{g/hp-hr}) & \text{Pollutant} \\
2.083 & \text{NOx} \\
0.14 & \text{VOC} \\
0.131 & \text{CO} \\
\end{array}
\]
For an EPA Certified Engine, the actual emission factor (EF_{\text{actual}}) shall be the EPA emission factor the engine is certified to meet.

Propane-Fired EPA Certified Engine - Diesel Equivalent Usage:

(g) When testing a propane-fired engine certified to meet an EPA emission factor, the diesel equivalent usage shall be computed based on the following formula:

\[
FC_e = FC \times 17,306 \times \left( \frac{EF_{\text{actual}}}{EF_{\text{benchmark}}} \right)
\]

Where:

\[
FC_e(\text{Pollutant}) = \text{diesel equivalent usage (gallons) per pollutant as listed in D.2.4(a)}
\]
\[
FC = \text{actual fuel use (mmscf of propane)}
\]
\[
17,306 = \text{adjustment factor (gallon diesel/mmscf propane)}
\]
\[
EF_{\text{actual}} = \text{EPA emission factor for engine tested (g/hp-hr)}
\]

<table>
<thead>
<tr>
<th>EF_{\text{benchmark}} (g/hp-hr)</th>
<th>Pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.015</td>
<td>PM</td>
</tr>
<tr>
<td>0.015</td>
<td>PM10</td>
</tr>
<tr>
<td>0.015</td>
<td>PM2.5</td>
</tr>
<tr>
<td>0.929</td>
<td>SO_2</td>
</tr>
</tbody>
</table>

For an EPA Certified Engine, the actual emission factor (EF_{\text{actual}}) shall be the EPA emission factor the engine is certified to meet.

Gasoline-Fired EPA Certified Engine - Diesel Equivalent Usage:

(h) When testing a gasoline-fired engine certified to meet an EPA emission factor, the diesel equivalent usage shall be computed based on the following formula:

\[
FC_e = FC \times 0.56 \times \left( \frac{EF_{\text{actual}}}{EF_{\text{benchmark}}} \right)
\]

Where:

\[
FC_e(\text{Pollutant}) = \text{diesel equivalent usage (gallons) per pollutant as listed in D.2.4(a)}
\]
\[
FC = \text{actual fuel use (gallons gasoline)}
\]
\[
0.56 = \text{adjustment factor (gallon diesel/gallon gasoline)}
\]
\[
EF_{\text{actual}} = \text{EPA emission factor for engine tested (g/hp-hr)}
\]

<table>
<thead>
<tr>
<th>EF_{\text{benchmark}} (g/hp-hr)</th>
<th>Pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.083</td>
<td>NOx</td>
</tr>
<tr>
<td>0.14</td>
<td>VOC</td>
</tr>
<tr>
<td>0.131</td>
<td>CO</td>
</tr>
<tr>
<td>0.015</td>
<td>PM</td>
</tr>
<tr>
<td>0.015</td>
<td>PM10</td>
</tr>
<tr>
<td>0.015</td>
<td>PM2.5</td>
</tr>
<tr>
<td>0.929</td>
<td>SO_2</td>
</tr>
</tbody>
</table>
For an EPA Certified Engine, the actual emission factor (EF_{\text{actual}}) shall be the EPA emission factor the engine is certified to meet.

**Engine that is not EPA certified - Diesel Equivalent Usage:**

(i) When testing an engine not certified to meet an EPA emission factor the following shall be used:

\[ F_{C_e} = F_C \times EV \]

Where:

\[ F_{C_e}(\text{Pollutant}) = \text{diesel equivalent usage (gallons) per pollutant as listed in D.2.4(a)} \]

\[ FC = \text{actual fuel use (units from following table)} \]

\[ EV = \text{equivalency factor (from following table)} \]

<table>
<thead>
<tr>
<th>Engine Type</th>
<th>fuel</th>
<th>Fuel unit</th>
<th>equivalency factor (EV)</th>
<th>unit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOx</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hp &lt;= 600 or mmbtu &lt;= 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>6.75</td>
<td>unit less</td>
</tr>
<tr>
<td>hp &gt; 600 or mmbtu &gt; 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>5.23</td>
<td>unit less</td>
</tr>
<tr>
<td>RICE 2SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>35271</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>45396</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SRB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>24590</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>Gasoline fired</td>
<td>Gasoline</td>
<td>gallon</td>
<td>2</td>
<td>unit less</td>
</tr>
<tr>
<td><strong>VOC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hp &lt;= 600 or mmbtu &lt;= 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>59.68</td>
<td>unit less</td>
</tr>
<tr>
<td>hp &gt; 600 or mmbtu &gt; 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>1.68</td>
<td>unit less</td>
</tr>
<tr>
<td>RICE 2SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>14638</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>14394</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SRB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>3611</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>Gasoline fired</td>
<td>Gasoline</td>
<td>gallon</td>
<td>51</td>
<td>unit less</td>
</tr>
<tr>
<td><strong>CO</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hp &lt;= 600 or mmbtu &lt;= 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>23.13</td>
<td>unit less</td>
</tr>
<tr>
<td>hp &gt; 600 or mmbtu &gt; 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>19.04</td>
<td>unit less</td>
</tr>
<tr>
<td>RICE 2SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>68291</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>56804</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SRB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>658146</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>Gasoline fired</td>
<td>Gasoline</td>
<td>gallon</td>
<td>24</td>
<td>unit less</td>
</tr>
<tr>
<td><strong>PM</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hp &lt;= 600 or mmbtu &lt;= 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>66.53</td>
<td>unit less</td>
</tr>
<tr>
<td>hp &gt; 600 or mmbtu &gt; 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>21.17</td>
<td>unit less</td>
</tr>
<tr>
<td>RICE 2SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>59332</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>Engine Type</td>
<td>fuel</td>
<td>Fuel unit</td>
<td>equivalency factor (EV)</td>
<td>unit</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------------</td>
<td>-----------</td>
<td>-------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>RICE 4SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>119</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SRB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>14679</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>Gasoline fired</td>
<td>Gasoline</td>
<td>gallon</td>
<td>21</td>
<td>unit less</td>
</tr>
</tbody>
</table>

**PM10**

- hp <= 600 or mmBtu <= 4.2: Diesel, gallon, 66.53, unit less
- hp > 600 or mmBtu > 4.2: Diesel, gallon, 12.13, unit less

| RICE 2SLB        | Natural gas or Propane      | mmscf     | 74644                   | gal/mmscf  |
| RICE 4SLB        | Natural gas or Propane      | mmscf     | 15431                   | gal/mmscf  |
| RICE 4SRB        | Natural gas or Propane      | mmscf     | 29991                   | gal/mmscf  |
| Gasoline fired   | Gasoline                   | gallon    | 21                      | unit less  |

**PM2.5**

- hp <= 600 or mmBtu <= 4.2: Diesel, gallon, 66.53, unit less
- hp > 600 or mmBtu > 4.2: Diesel, gallon, 11.77, unit less

| RICE 2SLB        | Natural gas or Propane      | mmscf     | 74644                   | gal/mmscf  |
| RICE 4SLB        | Natural gas or Propane      | mmscf     | 15431                   | gal/mmscf  |
| RICE 4SRB        | Natural gas or Propane      | mmscf     | 29991                   | gal/mmscf  |
| Gasoline fired   | Gasoline                   | gallon    | 21                      | unit less  |

**SO2**

- hp <= 600 or mmBtu <= 4.2: Diesel, gallon, 1.0, unit less
- hp > 600 or mmBtu > 4.2: Diesel, gallon, 0.06, unit less

| RICE 2SLB        | Natural gas or Propane      | mmscf     | 15                      | gal/mmscf  |
| RICE 4SLB        | Natural gas or Propane      | mmscf     | 15                      | gal/mmscf  |
| RICE 4SRB        | Natural gas or Propane      | mmscf     | 15                      | gal/mmscf  |
| Gasoline fired   | Gasoline                   | gallon    | 0.29                    | unit less  |

Compliance with these limits, shall limit the PM, PM10, PM2.5, NOx, VOC and CO potential to emit increase to less than 25, 15, 10, 40, 40 and 100 tons per twelve (12) consecutive month period, respectively, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the Project 1 Modification approved through SSM 097-41322-00310.

Compliance with these limits, shall limit the SO2 potential to emit increase to less than 40 tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-3 (Emission Offset) not applicable to the SSM 097-41322-00310.

**D.2.5 VOC Emission Limitation [326 IAC 8-1-6]**

In order to render the requirements of 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) not applicable, the VOC emissions from 45, 48N, 48S, 50N, 52N, 50S, and 52S, each, shall not exceed 24.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit, shall limit the potential to emit of VOC to less than twenty-five (25) tons per twelve (12) consecutive month period from 45, 48N, 48S, 50N, 52N 50S and 52S shall render the requirements of 326 IAC 8-1-6 not applicable to 45, 48N, 48S, 50N, 52N 50S and 52S.

**D.2.6 Hazardous Air Pollutants [326 IAC 20] [326 IAC 2-4.1]**

In order to render the requirements of 326 IAC 2-4.1 and 326 IAC 20 not applicable, the total...
Gasoline usage at the test cells 45, 48N, 48S, 50N, 52N, 50S and 52S shall not exceed 497.8 kilo gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with this limit, combined with the HAPs PTE of all other emission units at this source shall limit the source wide single HAP and combined HAPs to less than 10 and 25 tons per twelve (12) consecutive month period, respectively, and make the source an area source under the HAPs and shall render the requirements of 40 CFR 63, Subpart DDDDD not applicable.

D.2.7 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee’s obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.2.8 Sulfur Dioxide Emissions and Sulfur Content

Compliance for Test Cells specified in Condition D.2.2 shall be determined utilizing one of the following options:

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input by:

(1) Providing vendor analysis of fuel delivered, if accompanied by a certification; or

(2) Analyzing the fuel sample to determine the sulfur content of the fuel via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Fuel samples may be collected from the fuel tank immediately after the fuel tank is filled and before any fuel is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

D.2.9 Emission Factors and Performance Testing

(a) The Permittee shall use the following NOx emissions factors in conjunction with the actual throughput of diesel fuel fired in reciprocating engines utilized in Test Cell 39N to determine compliance with emissions limitation in Condition D.2.3:

<table>
<thead>
<tr>
<th>Reciprocating Engine Size (horsepower)</th>
<th>NOx emissions factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>600 or less</td>
<td>0.6042 pounds per gallon of diesel fuel combusted</td>
</tr>
<tr>
<td>greater than 600</td>
<td>0.4384 pounds per gallon of diesel fuel combusted</td>
</tr>
</tbody>
</table>

Monthly NOx emissions shall be determined by the following equation:
NOx emissions (tons) = (0.6042 lbs/gal x gal throughput for engines 600 hp or less + 0.4384 lbs/gal x gal throughput for engines greater than 600 hp) / 2,000 lbs NOx per ton

(b) In order to determine compliance with Condition D.2.3(b)(1), VOC emissions from test cells 50N, 52N, 50S, and 52S shall be calculated using the following equations:

1. Total VOC Emissions from a Single Test Cell (tons/this month) = VOC Emissions from Gasoline Combustion from a Single Test Cell (tons/this month) + VOC Emissions from Natural Gas Combustion from a Single Test Cell (tons/month) + VOC Emissions from Diesel Combustion from a Single Test Cell (tons/month)

2. VOC Emissions from Gasoline Combustion from a Single Test Cell (tons/this month) =

   \[ FC \times HC \times \left( \frac{1}{BSCF} \right) \times EF \times CF \times 1 \text{ ton/2,000 lb} \]

   Where:
   - \( FC \) = gallons of gasoline combusted this month
   - \( HC \) = heat content of gasoline, 130,000 Btu/gallon or documented site specific heat content
   - \( BSCF \) = brake specific fuel consumption, 8,000 Btu/hp.hr or documented engine specific factor
   - \( EF \) = VOC emission factor in g/kw.hr, 2.7 g/kw.hr or documented engine specific factor
   - \( CF \) = conversion factor, 1.645 E-03 lb.kw/g.hp

3. VOC Emissions from Natural Gas Combustion from a Single Test Cell (tons/this month) =

   \[ FC \times HC \times \left( \frac{1}{BSCF} \right) \times EF \times CF \times 1 \text{ ton/2,000 lb} \]

   Where:
   - \( FC \) = MMCF of natural gas combusted this month
   - \( HC \) = heat content of natural gas, 1,020 MMBtu/MMCF or documented site specific heat content
   - \( BSCF \) = brake specific fuel consumption, 8,750 Btu/hp.hr or documented engine specific factor
   - \( EF \) = VOC emission factor in g/hp.hr, 0.7 g/hp.hr or documented engine specific factor
   - \( CF \) = conversion factor, 2,204.63 lb.Btu/g.MMBtu

4. VOC Emissions from Diesel Combustion from a Single Test Cell (tons/this month) =

   \[ FC \times HC \times \left( \frac{1}{BSCF} \right) \times EF \times CF \times 1 \text{ ton/2,000 lb} \]

   Where:
   - \( FC \) = gallons of diesel combusted this month
   - \( HC \) = heat content of diesel, 140,000 Btu/gallon or documented site specific heat content
   - \( BSCF \) = brake specific fuel consumption, 7,000 Btu/hp.hr or documented engine specific factor
   - \( EF \) = VOC emission factor in g/kw.hr, 0.19 g/kw.hr or documented engine specific factor
   - \( CF \) = conversion factor, 1.645 E-03 lb.kw/g.hp

5. Total VOC Emissions for Compliance with Condition D.2.3(b)(1) (tons/this month) = Total VOC Emissions from Test Cell 50N + Total VOC Emissions from Test
Cell 52N + Total VOC Emissions from Test Cell 50S + Total VOC Emissions from Test Cell 52S

(6) VOC Emissions for Compliance with Condition D.2.3(b)(1) (tons/twelve consecutive month period) = Total VOC Emissions for Compliance with Condition D.2.3(b)(1) (tons/this month) + Total VOC Emissions for Compliance with Condition D.2.3(b)(1) (tons previous eleven months)

(c) In order to determine compliance with Condition D.2.3(b)(2), NOx emissions from test cells 50N, 52N, 50S, and 52S shall be calculated using the following equations:

(1) Total NOx Emissions from a Single Test Cell (tons/this month) = NOx Emissions from Gasoline Combustion from a Single Test Cell (tons/this month) + NOx Emissions from Natural Gas Combustion from a Single Test Cell (tons/month) + NOx Emissions from Diesel Combustion from a Single Test Cell (tons/month)

(2) NOx Emissions from Gasoline Combustion from a Single Test Cell (tons/this month) =

\[ FC \times HC \times \left( \frac{1}{BSFC} \right) \times EF \times CF \times \frac{1}{2,000} \text{ lb} \]

Where:
- \( FC \) = gallons of gasoline combusted this month
- \( HC \) = heat content of gasoline, 130,000 Btu/gallon or documented site specific heat content
- \( BSFC \) = brake specific fuel consumption, 8,000 Btu/hp.hr or documented engine specific factor
- \( EF \) = NOx emission factor in g/kw.hr, 2.7 g/kw.hr or documented engine specific factor
- \( CF \) = conversion factor, 1.645 E-03 lb.kw/g.hp

(3) NOx Emissions from Natural Gas Combustion from a Single Test Cell (tons/this month) =

\[ FC \times HC \times \left( \frac{1}{BSFC} \right) \times EF \times CF \times \frac{1}{2,000} \text{ lb} \]

Where:
- \( FC \) = MMCF of natural gas combusted this month
- \( HC \) = heat content of natural gas, 1,020 MMBtu/MMCF or documented site specific heat content
- \( BSFC \) = brake specific fuel consumption, 8,750 Btu/hp.hr or documented engine specific factor
- \( EF \) = NOx emission factor in g/hp.hr, 1.0 g/hp.hr or documented engine specific factor
- \( CF \) = conversion factor, 2,204.63 lb.Btu/g.MMBtu

(4) NOx Emissions from Diesel Combustion from a Single Test Cell (tons/this month) =

\[ FC \times HC \times \left( \frac{1}{BSFC} \right) \times EF \times CF \times \frac{1}{2,000} \text{ lb} \]

Where:
- \( FC \) = gallons of diesel combusted this month
- \( HC \) = heat content of diesel, 140,000 Btu/gallon or documented site specific heat content
- \( BSFC \) = brake specific fuel consumption, 7,000 Btu/hp.hr or documented engine specific factor
- \( EF \) = For test cells 50N, 52N, 50S, and 52S, the NOx emission factor in g/kw.hr, is 3.5 g/kw.hr for diesel engines with an output rating greater than 750 HP or
0.4 g/kw.hr for diesel engines with an output rating
equal to or less than 750 HP or a documented
engine specific factor.

\[ CF = \] conversion factor, 1.645 E-03 lb.kw/g.hp

(5) Total NOx Emissions for Compliance with Condition D.2.3(b)(2) (tons/this month)
= Total NOx Emissions from Test Cell 50N + Total NOx Emissions from Test Cell 52N + Total NOx Emissions from Test Cell 50S + Total NOx Emissions from Test Cell 52S

(6) NOx Emissions for Compliance with Condition D.2.3(b)(2) (tons/twelve
consecutive month period) = Total NOx Emissions for Compliance with Condition D.2.3(b)(1) (tons/this month) + Total NOx Emissions for Compliance with Condition D.2.3(b)(1) (tons previous eleven months)

(d) In order to determine compliance with Condition D.2.5, VOC emissions from test cells 45, 48N, 48S, 50N, 52N, 50S, and 52S shall be calculated using AP42 emission factors or EPA certified rates.

(e) Pursuant to IC 13-15-7-1, IC 13-15-7-2, 326 IC 2-1.1-9(2) and 326 IAC 2-1.1-11 the IDEM, OAQ reserves the authority to require the Permittee to conduct performance tests to verify the emissions factors of this permit.

(f) After issuance of this permit, if the performance test results indicate a discrepancy between the emission factors and the actual emissions rate observed during the test, the Permittee shall inform IDEM, OAQ, Permits Branch of such variation no later than 90 days of the submission of performance test report to IDEM.

(g) Pursuant to IC 13-15-7-1, IC 13-15-7-2 and 326 IC 2-1.1-9(2), the IDEM, OAQ may re-evaluate the permit conditions and emissions factors. IDEM, OAQ may, at its discretion, use the authority under IC 13-15-7-2, IC 13-15-7-2 and/or 326 IAC 2-1.1-9(2) to re-open and revise the permit to more closely reflect the actual performance test results using permit amendment or modification procedures.

**Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

**D.2.10 Record Keeping Requirements**

(a) To document the compliance status with Condition D.2.2, the Permittee shall maintain records in accordance with (1) through (6) below. Records necessary to demonstrate compliance shall be available not later than thirty (30) days of the end of each compliance period.

(1) Calendar dates covered in the compliance determination period;

(2) Actual diesel fuel usage since last compliance determination period and equivalent sulfur dioxide emissions;

(3) A certification, signed by the owner or operator which is not necessarily the responsible official, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(4) Fuel supplier certifications.

(5) The name of the fuel supplier; and
(6) A statement from the fuel supplier that certifies the sulfur content of the diesel fuel.

(b) To document the compliance status with Conditions D.2.3 and D.2.9, the Permittee shall:

(1) Maintain monthly records of the diesel fuel throughput in Test Cell 39N for engines 600 horsepower or less and maintain monthly records of diesel fuel throughput in Test Cell 39N for engines greater than 600 horsepower.

(2) Maintain records of NOx emissions on a monthly basis using the emissions factors in Condition D.2.6 in conjunction with monthly diesel fuel throughput in test Cell 39N to calculate emissions from Test Cell 39N.

(3) Maintain monthly records of fuel usage in test cells 50N, 52N, 50S, and 52S. Records shall include type of fuel combusted and the monthly amount of each fuel combusted.

(4) Maintain records of engine manufacturer emission estimates for VOC and NOx for each engine family installed in test cells 50N, 52N, 50S, and 52S.

(5) Maintain records of NOx and VOC emissions from test cells 50N, 52N, 50S, and 52S each month and each compliance period using the equations in Condition D.2.6.

(6) Maintain records of fuel consumption rates provided by the engine manufacturer for each engine type installed in test cells 50N, 52N, 50S, and 52S.

(c) To document the compliance status with Condition D.2.4, the Permittee shall maintain monthly records shown below for the engines tested at the Test Cells 45, 48N, 48S, and 51N that qualifies under Condition D.2.4(b), (c), and (d) as being subject to the diesel equivalent usage limit (FCe(Pollutant)). Records shall be complete and sufficient to establish compliance with the Condition D.2.4.

(1) Documentation whether the engine is EPA certified or noncertified.

(2) Documentation of EPA certified emission rates, if EPA certified emission rates are used in the diesel equivalent usage calculations.

(3) Actual emission factor (EF\text{actual}) used in the diesel equivalent usage calculations.

(4) Actual fuel usage (FC) by amount and type.

(5) Calculated value of diesel equivalent usage (FCe(Pollutant))

(6) In lieu of maintaining records for each engine, the source may elect to maintain records for each group of identical engines.

(7) The sum of the diesel equivalent usage (FCe(Pollutant)) or each month and each compliance period, each diesel equivalent usage (FCe(Pollutant)) specified in Condition D.2.4.

(d) To document the compliance status with Conditions D.2.4 and D.2.5, the Permittee shall maintain monthly records shown below for each engine tested at the Test Cells 45, 48N, 48S, 51N, 50N, 52N, 50S, and 52S. Records shall be complete and sufficient to establish compliance with the Conditions D.2.4 and D.2.5.
(1) Engine rating at the Test Cells 45, 48N, 48S, 51N, 50N, 52N, 50S, and 52S.

(3) Amount and type of each fuel used 45, 48N, 48S, 51N, 50N, 52N, 50S, and 52S.

(4) Documentation whether the engine is EPA certified or noncertified at Test Cells 45, 48N, 48S, 51N, 50N, 52N, 50S, and 52S.

(5) Documentation of EPA certified emission rates, if EPA certified emission rates are used in the equivalent diesel usage calculations and VOC emission calculations.

(6) Equivalent diesel usage calculations for the Test Cells 45, 48N, 48S, and 51N.

(7) VOC emission calculations for the Test Cells 45, 48N, 48S, 50N, 52N, 50S, 52S.

(e) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required to be maintained by this condition.

D.2.11 Reporting Requirements

(a) If the Permittee is a member of IDEM's Environmental Stewardship Program (ESP) program, semi-annual summaries of the information to document the compliance status with Conditions D.2.3, D.2.4(a), D.2.4, D.2.5 and D.2.6 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the semi-annual period being reported.

(b) If the Permittee is no longer a member of IDEM's Environmental Stewardship Program (ESP) program, quarterly summaries of the information to document the compliance status with Conditions D.2.3, D.2.4(a), D.2.4, D.2.5 and D.2.6 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the calendar quarter being reported.

(c) Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The reports submitted by the Permittee do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
SECTION D.3  EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Descriptions:

(d) Emission unit DTC consists of the following four (4) transmission reliability test cells, TC-107, TC-109, TC-111 and TC-112. All test cells were constructed in 1985. The following engines can be used in any one of the individual test cells mentioned above:

<table>
<thead>
<tr>
<th>Test Cell ID</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>Stack ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC-107</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 045</td>
</tr>
<tr>
<td>TC-109</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 043</td>
</tr>
<tr>
<td>TC-111</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 049</td>
</tr>
<tr>
<td>TC-112</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 050</td>
</tr>
</tbody>
</table>

Under 40 CFR 63, Subpart ZZZZ, these engines are each an affected source. The engines in each of the test cells are considered affected sources under 40 CFR 60, Subpart III when a new engine is installed in the test cell and a test cell exemption does not apply.

(The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Particulate Matter Limitations Except Lake County [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate (PM) emissions from each of the Test Cells TC-107, TC-109, TC-111 and TC-112 shall not exceed three hundredths (0.03) grains per dry standard cubic foot of exhaust air.

D.3.2 PSD Minor Limit [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to Test Cells TC-107, TC-109, TC-111 and TC-112, the Permittee shall comply with the following:

(a) Combined NOx emissions from diesel fuel fired reciprocating engines utilized in Test Cells TC-107, TC-109, TC-111 and TC-112 shall be limited to less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The combined input of diesel fuel to reciprocating engines utilized in Test Cells TC-107, TC-109, TC-111 and TC-112 shall be less than 182,481 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. For the purposes of determining compliance, each gallon of diesel fuel burned in reciprocating engines that are equal to or less than 600 horsepower shall be equivalent to one and thirty seven hundredths (1.378) gallons of diesel fuel burned in reciprocating engines that are greater than 600 horsepower.

Compliance with the above limits shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to Test Cells TC-107, TC-109, TC-111 and TC-112.
D.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.3.4 Emission Factors and Performance Testing

(a) The Permittee shall use the following NOx emissions factors in conjunction with the actual throughput of diesel fuel fired in reciprocating engines utilized in Test Cells TC-107, TC-109, TC-111, TC-112 to determine compliance with emissions limitation in Condition D.3.2:

<table>
<thead>
<tr>
<th>Reciprocating Engine Size (horsepower)</th>
<th>NOx emissions factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>600 or less</td>
<td>0.6042 pounds per gallon of diesel fuel combusted</td>
</tr>
<tr>
<td>greater than 600</td>
<td>0.4384 pounds per gallon of diesel fuel combusted</td>
</tr>
</tbody>
</table>

(b) Monthly NOx emissions shall be determined by the following equation:

\[
\text{NOx emissions (tons)} = \left(0.6042 \text{ lbs/gal} \times \text{gal throughput for engines 600 hp or less} + 0.4384 \text{ lbs/gal} \times \text{gal throughput for engines greater than 600 hp}\right) / 2,000 \text{ lbs NOx per ton NOx}
\]

(c) Pursuant to IC 13-15-7-1, IC 13-15-7-2, 326 IC 2-1.1-9(2) and 326 IAC 2-1.1-11 the IDEM, OAQ reserves the authority to require the Permittee to conduct performance tests to verify the emissions factors of this permit.

(d) After issuance of this permit, if the performance test results indicate a discrepancy between the emission factors and the actual emissions rate observed during the test, the Permittee shall inform IDEM, OAQ, Permits Branch of such variation no later than 90 days of the submission of performance test report to IDEM.

(e) Pursuant to IC 13-15-7-1, IC 13-15-7-2 and 326 IC 2-1.1-9(2), the IDEM, OAQ may re-evaluate the permit conditions and emissions factors. IDEM, OAQ may, at its discretion, use the authority under IC 13-15-7-2, IC 13-15-7-2 and/or 326 IAC 2-1.1-9(2) to re-open and revise the permit to more closely reflect the actual performance test results using permit amendment or modification procedures.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.5 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.2 and Condition D.3.4, the Permittee shall:

1. Maintain monthly records of the diesel fuel throughput in Test Cells TC-107, TC-109, TC-111, and TC-112 for engines 600 horsepower or less and maintain monthly records of diesel fuel throughput in Test Cells TC-107, TC-109, TC-111, and TC-112 for engines greater than 600 horsepower.

2. Maintain records of NOx emissions on a monthly basis using the emissions factors in Condition D.3.4 in conjunction with monthly diesel fuel throughput in Test Cells TC-107, TC-109, TC-111, TC-112 to calculate combined NOx emissions from Test Cells TC-107, TC-109, TC-111, and TC-112. Records
necessary to demonstrate the compliance status shall be available not later than thirty (30) days of the end of each compliance period.

(b) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required to be maintained by this condition.

D.3.6 Reporting Requirements

(a) If the Permittee is a member of IDEM's Environmental Stewardship Program (ESP) program, a semi-annual summary of the information to document the compliance status with Condition D.3.2 and Condition D.3.4 shall be submitted using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days after the end of the semi-annual period being reported.

(b) If the Permittee is no longer a member of IDEM's Environmental Stewardship Program (ESP) program, a quarterly summary of the information to document the compliance status with Condition D.3.2 and Condition D.3.4 shall be submitted using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days after the end of the calendar quarter being reported.

(c) Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35).
SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Descriptions:

(e) Emission unit PTS14 consists of the following four (4) transmission test stands, identified as test stand O-2, O-24, O-25 and O-31. Test stands O-2, O-24, O-25 and O-31 were constructed in 1978, 1979, 1986, 1986, and 1984 respectively. The table below lists the fuel type and engine type that each stand is capable of accommodating based on the physical characteristics of each stand. Test stands O-2, and O-31 each utilize an oxidation catalyst system to control CO emissions.

<table>
<thead>
<tr>
<th>Test Stand ID</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>Stack ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>O-2</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>14038</td>
</tr>
<tr>
<td>O-24</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>600</td>
<td>14024</td>
</tr>
<tr>
<td>O-25</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>600</td>
<td>14023</td>
</tr>
<tr>
<td>O-31</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>14045</td>
</tr>
</tbody>
</table>

Under 40 CFR 63, Subpart ZZZZ, these engines are each an affected source. The engines in each of the test stands are considered affected sources under 40 CFR 60, Subpart IIII when a new engine is installed in the test stand and a test cell exemption does not apply.

(The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Particulate Matter Limitations Except Lake County [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate (PM) emissions from each of the Test Stands O-2, O-24, O-25 and O-31 shall not exceed three hundredths (0.03) grains per dry standard cubic foot of exhaust air.

D.4.2 PSD Minor Limit [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements) not applicable to Test Stands O-2, O-24, O-25 and O-31, the Permittee shall comply with the following:

(a) The NOx emissions from diesel fuel fired reciprocating engines utilized in Test Stand O-2 shall be limited to less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The input of diesel fuel to reciprocating engines utilized in Test Stands O-2 shall be less than 182,481 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. For the purposes of determining compliance, gallon of diesel fuel burned in reciprocating engines that are equal to or less than 600 horsepower shall be equivalent to one and thirty seven hundredths (1.378) gallons of diesel fuel burned in reciprocating engines that are greater than 600 horsepower.

(c) Combined NOx emissions from diesel fuel fired reciprocating engines utilized in Test Stands O-24 and O-25 shall be limited to less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
(d) The combined input of diesel fuel to reciprocating engines utilized in Test Stands O-24 and O-25 shall be less than 182,481 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. For the purposes of determining compliance, each gallon of diesel fuel burned in reciprocating engines that are equal to or less than 600 horsepower shall be equivalent to one and thirty seven hundredths (1.378) gallons of diesel fuel burned in reciprocating engines that are greater than 600 horsepower.

(e) NOx emissions from diesel fuel fired reciprocating engines utilized in Test Stand O-31 shall be limited to less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(f) The input of diesel fuel to reciprocating engines utilized in Test Stand O-31 shall be less than 182,481 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. For the purposes of determining compliance, each gallon of diesel fuel burned in reciprocating engines that are equal to or less than 600 horsepower shall be equivalent to one and thirty seven hundredths (1.378) gallons of diesel fuel burned in reciprocating engines that are greater than 600 horsepower.

Compliance with the above limits shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to Test Stands O-2, O-24, O-25 and O-31.

D.4.3 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1]

Pursuant to 326 IAC 7-1.1-1 (SO2 Emissions Limitations), Sulfur Dioxide (SO2) emissions from Test Cells O-2 and O-31, shall each not exceed five tenths (0.5) pounds per million Btu heat input.

D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.4.5 Emission Factors and Performance Testing

<table>
<thead>
<tr>
<th>Reciprocating Engine Size (horsepower)</th>
<th>NOx emissions factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>600 or less</td>
<td>0.6042 pounds per gallon of diesel fuel combusted</td>
</tr>
<tr>
<td>greater than 600</td>
<td>0.4384 pounds per gallon of diesel fuel combusted</td>
</tr>
</tbody>
</table>

(b) Monthly NOx emissions shall be determined by the following equation:

\[
\text{NOx emissions (tons)} = \left(\frac{0.6042 \text{ lbs/gal} \times \text{gal throughput for engines 600 hp or less} + 0.4384 \text{ lbs/gal} \times \text{gal throughput for engines greater than 600 hp}}{2,000 \text{ lbs NOx per ton NOx}}\right).
\]

(c) Pursuant to IC 13-15-7-1, IC 13-15-7-2, 326 IC 2-1.1-9(2) and 326 IAC 2-1.1-11 the IDEM, OAQ reserves the authority to require the Permittee to conduct performance tests to verify the emissions factors of this permit.
(d) After issuance of this permit, if the performance test results indicate a discrepancy between the emission factors and the actual emissions rate observed during the test, the Permittee shall inform IDEM, OAQ, Permits Branch of such variation no later than 90 days of the submission of performance test report to IDEM.

(e) Pursuant to IC 13-15-7-1, IC 13-15-7-2 and 326 IC 2-1.1-9(2), the IDEM, OAQ may re-evaluate the permit conditions and emissions factors. IDEM, OAQ may, at its discretion, use the authority under IC 13-15-7-2, IC 13-15-7-2 and/or 326 IAC 2-1.1-9(2) to re-open and revise the permit to more closely reflect the actual performance test results using permit amendment or modification procedures.

D.4.6 Sulfur Dioxide Emissions and Sulfur Content

Compliance for Transmission Test Stands specified in Condition D.4.3 shall be determined utilizing one of the following options:

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input by:

(1) Providing vendor analysis of fuel delivered, if accompanied by a certification; or

(2) Analyzing the fuel sample to determine the sulfur content of the fuel via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Fuel samples may be collected from the fuel tank immediately after the fuel tank is filled and before any fuel is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.7 Record Keeping Requirements

(a) To document the compliance status with Condition D.4.2(b) and Condition D.4.5, for Test Stand O-2, maintain monthly records of the diesel fuel throughput for engines 600 horsepower or less and maintain monthly records of diesel fuel throughput for engines greater than 600 horsepower. Maintain records of the NOx emissions on a monthly basis using the emissions factors in Condition D.4.5 in conjunction with monthly diesel fuel throughput in Test Stands O-2 to calculate NOx emissions from Test Stand O-2. Records necessary to demonstrate compliance shall be available no later than thirty (30) days of the end of each compliance period.

(b) To document the compliance status with Condition D.4.2(d), for Test Stands O-24 and O-25, maintain monthly records of the diesel fuel throughput for engines 600 horsepower or less and maintain monthly records of diesel fuel throughput for engines greater than 600 horsepower. Maintain records of the combined NOx emissions on a monthly basis using the emissions factors in Condition D.4.5 in conjunction with combined monthly diesel fuel throughput in Test Stands O-24 and O-25 to calculate NOx emissions from Test Stand O-24 and O-25. Records necessary to demonstrate compliance shall be available no later than thirty (30) days of the end of each compliance period.
To document the compliance status with Condition D.4.2(f), for Test Stand O-31, maintain monthly records of the diesel fuel throughput for engines 600 horsepower or less and maintain monthly records of diesel fuel throughput for engines greater than 600 horsepower. Maintain records of the NOx emissions on a monthly basis using the emissions factors in Condition D.4.5 in conjunction with monthly diesel fuel throughput in Test Stand O-31 to calculate emissions from Test Stand O-31. Records necessary to demonstrate compliance shall be available no later than thirty (30) days after the end of each compliance period.

To document the compliance status with Condition D.4.3, the Permittee shall maintain records in accordance with (1) through (6) below. Records necessary to demonstrate compliance shall be available not later than thirty (30) days of the end of each compliance period.

1. Calendar dates covered in the compliance determination period;
2. Actual diesel fuel usage since last compliance determination period and equivalent sulfur dioxide emissions;
3. A certification, signed by the owner or operator which is not necessarily the responsible official, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and
   If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:
   4. Fuel supplier certifications.
   5. The name of the fuel supplier; and
   6. A statement from the fuel supplier that certifies the sulfur content of the diesel fuel.

Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required to be maintained by this condition.

D.4.8 Reporting Requirements

(a) If the Permittee is a member of IDEM's Environmental Stewardship Program (ESP) program, semi-annual summaries of the information to document the compliance status with Condition D.4.2 and Condition D.4.5 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the semi-annual period being reported.

(b) If the Permittee is no longer a member of IDEM's Environmental Stewardship Program (ESP) program, quarterly summaries of the information to document the compliance status with Condition D.4.2 and Condition D.4.5 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the calendar quarter being reported.

(c) Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The reports submitted by the Permittee do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Descriptions:

(j) Transmission Test Cell 53, identified as ETC53, approved in 2015 for construction, consisting of two reciprocating engines (53N and 53S) firing low sulfur diesel fuel (150 ppm or less), with an estimated maximum engine size of equal to or less than 1000 HP each and exhausting to Stack/Vents PTE95 and PTE96.

Under 40 CFR 63, Subpart ZZZZ, this operation is an affected source. The engine is considered an affected source under 40 CFR 60 Subpart IIII when a new diesel engine is installed in the test cell and a test cell exemption does not apply.

(The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.1 Particulate Matter Limitations Except Lake County [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate (PM) emissions from ETC53 shall not exceed three hundredths (0.03) grains per dry standard cubic foot of exhaust air.

D.5.2 PSD Minor Limit [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable to ETC53, NOx emissions from diesel fuel fired reciprocating engines utilized in ETC53 shall be less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month. Compliance with these limits shall render 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to ETC53.

D.5.3 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1]

Pursuant to 326 IAC 7-1.1-2 (SO2 Emissions Limitations), Sulfur Dioxide (SO2) emissions from ETC53 shall not exceed five tenths (0.5) pounds per million Btu heat input.

D.5.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.5.5 NOx Emissions Determination

To comply with the NOx emissions limit in Condition D.5.2(a), the following equation shall be used:

\[ \text{NOx} = \left( (\text{FU} \times D \times \text{EF} / \text{FCR})_{\text{Engine 1}} + (\text{FU} \times D \times \text{EF} / \text{FCR})_{\text{Engine 2}} \right) \times 1 \text{ ton} / 2,000 \text{ lb} \]

Where:
- \( \text{NOx} = \) NOx emissions (ton/month)
- \( \text{FU} = \) Fuel Usage (gal/month)
- \( D = \) Density of fuel (lb/gal)
- \( \text{EF} = \) NOx Emission Factor (lb/hp-hr) (For each engine type used, the emission factor shall be the emission limitation from the applicable federal engine emission standards.)
- \( \text{FCR} = \) Fuel Consumption Rate (lb fuel/hp-hr)
D.5.6 Sulfur Dioxide Emissions and Sulfur Content

Compliance with Condition D.5.3 shall be determined utilizing one of the following options:

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input by:

(1) Providing vendor analysis of fuel delivered, if accompanied by a certification; or

(2) Analyzing the fuel sample to determine the sulfur content of the fuel via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Fuel samples may be collected from the fuel tank immediately after the fuel tank is filled and before any fuel is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.5.7 Record Keeping Requirements

(a) To document the compliance status with Condition D.5.2, the Permittee shall:

(1) Maintain monthly records of the diesel fuel throughput, fuel density, fuel consumption rate, and the emission factors for NOx for 53N and 53S in Test Cell ETC53.

(2) Maintain records of NOx emissions on a monthly basis using the equation in Condition D.5.5.

(b) To document the compliance status with Condition D.5.3, the Permittee shall maintain records in accordance with (1) through (6) below:

(1) Calendar dates covered in the compliance determination period;

(2) Actual diesel fuel usage since last compliance determination period and equivalent sulfur dioxide emissions;

(3) A certification, signed by the owner or operator which is not necessarily the responsible official, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(4) Fuel supplier certifications.

(5) The name of the fuel supplier; and

(6) A statement from the fuel supplier that certifies the sulfur content of the diesel fuel.
D.5.8 Reporting Requirements

(a) If the Permittee is a member of IDEM's Environmental Stewardship Program (ESP) program, a semi-annual summary of the information to document the compliance status with Condition D.5.2 and Condition D.5.5 shall be submitted using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days after the end of the semi-annual period being reported.

(b) If the Permittee is no longer a member of IDEM's Environmental Stewardship Program (ESP) program, quarterly summary of the information to document the compliance status with Condition D.5.2 and Condition D.5.5 shall be submitted using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days after the end of the calendar quarter being reported.

(c) Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Descriptions:

(f) Transmission Test Cell 702, identified as Emission Unit ID ETC702, consisting of one (1) reciprocating engine firing diesel fuel, with an estimated maximum engine size of 4000 hp, and exhausting at Stack/ Vent IDs PTE062 and PTE062A. This emission unit can accommodate engines of greater than 600 horsepower. Constructed in 2002.

Under 40 CFR 63, Subpart ZZZZ, this operation is an affected source. The engine is considered an affected source under 40 CFR 60, Subpart IIII when a new engine is installed in the test cell and a test cell exemption does not apply.

(The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.6.1 Particulate Matter Limitations Except Lake County [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate (PM) emissions from Emission Unit ID ETC702 shall not exceed three hundredths (0.03) grains per dry standard cubic foot of exhaust air.

D.6.2 PSD Minor Limit [326 IAC 2-2] [Significant Source Modification 097-15550-00310]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to Test Cell 702, the Permittee shall comply with the following:

(a) NOx emissions from diesel fuel fired reciprocating engines utilized in Test Cell 702 shall be limited to less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The input of diesel fuel to Test Cell 702 shall be less than 173,516 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. For the purposes of determining compliance, each gallon of diesel fuel burned in reciprocating engines that are equal to or less than 600 horsepower shall be equivalent to one and thirty seven hundredths (1.378) gallons of diesel fuel burned in reciprocating engines that are greater than 600 horsepower.

Compliance with the above limits shall render 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to Test Cell 702.

D.6.3 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1]

Pursuant to 326 IAC 7-1.1-1 (SO2 Emissions Limitations), Sulfur Dioxide (SO2) emissions from Test Cell 702 shall each not exceed five tenths (0.5) pounds per million Btu heat input.

D.6.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee’s obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.6.5 Emission Factors and Performance Testing

(a) The Permittee shall use the following NOx emissions factors in conjunction with the actual throughput of diesel fuel fired in reciprocating engines utilized in Test Cell 702 to determine compliance with emissions limitation in Condition D.6.2:
Reciprocating Engine Size (horsepower) | NOx emissions factor
---|---
600 or less | 0.6042 pounds per gallon of diesel fuel combusted
greater than 600 | 0.4384 pounds per gallon of diesel fuel combusted

(b) Monthly NOx emissions shall be determined by the following equation:

\[
\text{NOx emissions (tons)} = \frac{(0.6042 \text{ lbs/gal} \times \text{gal throughput for engines 600 hp or less} + 0.4384 \text{ lbs/gal} \times \text{gal throughput for engines greater than 600 hp})}{2,000 \text{ lbs NOx per ton NOx}}
\]

(c) Pursuant to IC 13-15-7-1, IC 13-15-7-2, 326 IC 2-1.1-9(2) and 326 IAC 2-1.1-11 the IDEM, OAQ reserves the authority to require the Permittee to conduct performance tests to verify the emissions factors of this permit.

(d) After issuance of this permit, if the performance test results indicate a discrepancy between the emission factors and the actual emissions rate observed during the test, the Permittee shall inform IDEM, OAQ, Permits Branch of such variation no later than 90 days of the submission of performance test report to IDEM.

(e) Pursuant to IC 13-15-7-1, IC 13-15-7-2 and 326 IC 2-1.1-9(2), the IDEM, OAQ may re-evaluate the permit conditions and emissions factors. IDEM, OAQ may, at its discretion, use the authority under IC 13-15-7-2, IC 13-15-7-2 and/or 326 IAC 2-1.1-9(2) to re-open and revise the permit to more closely reflect the actual performance test results using permit amendment or modification procedures.

D.6.6 Sulfur Dioxide Emissions and Sulfur Content

Compliance for Test Cells specified in Condition D.6.3 shall be determined utilizing one of the following options:

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input by:

(1) Providing vendor analysis of fuel delivered, if accompanied by a certification; or

(2) Analyzing the fuel sample to determine the sulfur content of the fuel via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Fuel samples may be collected from the fuel tank immediately after the fuel tank is filled and before any fuel is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.
Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.6.7 Record Keeping Requirements

(a) To document the compliance status with Condition D.6.2 and Condition D.6.5, the Permittee shall:

(1) Maintain monthly records of the diesel fuel throughput in Test Cell 702 for engines 600 horsepower or less and maintain monthly records of diesel fuel throughput in Test Cell 702 for engines greater than 600 horsepower.

(2) Maintain records of NOx emissions on a monthly basis using the emissions factors in Condition D.6.5 in conjunction with monthly diesel fuel throughput in Test Cell 702 to calculate NOx emissions from Test Cell 702. Records necessary to demonstrate compliance shall be available no later than thirty (30) days of the end of each compliance period.

(b) To document the compliance status with Condition D.6.3, the Permittee shall maintain records in accordance with (1) through (6) below. Records necessary to demonstrate compliance shall be available not later than thirty (30) days of the end of each compliance period.

(1) Calendar dates covered in the compliance determination period;

(2) Actual diesel fuel usage since last compliance determination period and equivalent sulfur dioxide emissions;

(3) A certification, signed by the owner or operator which is not necessarily the responsible official, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(4) Fuel supplier certifications.

(5) The name of the fuel supplier; and

(6) A statement from the fuel supplier that certifies the sulfur content of the diesel fuel.

(c) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required to be maintained by this condition.

D.6.8 Reporting Requirements

(a) If the Permittee is a member of IDEM's Environmental Stewardship Program (ESP) program, a semi-annual summary of the information to document the compliance status with Conditions D.6.2 and D.6.5 shall be submitted using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days after the end of the semi-annual period being reported.

(b) If the Permittee is no longer a member of IDEM's Environmental Stewardship Program (ESP) program, a quarterly summary of the information to document the compliance status with Conditions D.6.2 and D.6.5 shall be submitted using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days after the end of the calendar quarter being reported.
Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35).
SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Descriptions:

(g) One (1) natural gas-fired boiler, identified as Emission Unit ID BLR6, constructed in 2011, with a maximum heat input of 99 million Btu per hour, equipped with low-NOx burners and flue gas recirculation.

Under 40 CFR 60, Subpart Dc, this operation is an affected source.

(The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.7.1 Particulate Emission Limitation [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(b)(3), particulate emissions from the boiler BLR6 shall not exceed 0.01 grains per dry standard cubic foot (dscf).

D.7.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee’s obligation with regard to the preventive maintenance plan required by this condition.
SECTION D.8 EMISSIONS UNIT OPERATION CONDITIONS

**Emissions Unit Description:**

(k) One (1) diesel-fired emergency generator, approved in 2016 for construction, identified as Genset 1a, with a maximum power output of 2,965 HP (22.76 MMBtu/hr input), using low sulfur diesel (150 ppm sulfur) equipped with a diesel particulate filter, exhausting to stack G1a. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ]

(l) One (1) diesel-fired emergency generator, approved in 2016 for construction, identified as Genset 1b, with a maximum power output of 2,965 HP (22.76 MMBtu/hr input), using low sulfur diesel (150 ppm sulfur) equipped with a diesel particulate filter, exhausting to stack G1b. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ]

**Insignificant Activities:**

(a) Space heaters, process heaters, or boilers using the following fuels:

   (1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.

(z) Emergency diesel generators not exceeding 1600 horsepower.

   (1) one (1) 1490 hp diesel emergency generator located in the Powerhouse courtyard.

   (2) one (1) 490 hp diesel emergency generator located in Plant 7.

   (3) one (1) 415 hp diesel emergency generator located in Plant 12/14.

Under 40 CFR 60, Subpart IIII, these operations are each an affected source. Under 40 CFR 63, Subpart ZZZZ, these operations are each an affected source.

(aa) One (1) diesel-fired emergency stationary fire pump engine, identified as Engine 1, constructed in 2012 and permitted in 2017, with a maximum heat input of 2.52 MMBtu/hr.

Under 40 CFR 63, Subpart ZZZZ, Engine 1 is considered an affected source.

Under 40 CFR 60, Subpart IIII, Engine 1 is considered an affected facility.

(bb) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.

   (1) Shot Blast controlled with fabric filters.

(ff) Activities or categories of activities with individual HAP emissions not previously identified. Any unit emitting greater than 1 pound per day but less than 5 pounds per day or 1 ton per year of a single HAP.

   (1) Production welding - manganese

(mm) Twenty (20) draw/temper furnaces used to complete the hardening process and drive off moisture, with each furnace heated with natural gas heaters, as follows:
### Location

<table>
<thead>
<tr>
<th>Location</th>
<th>Unit ID</th>
<th>Construction Date</th>
<th>Fuel Combusted</th>
<th>Maximum Fuel Heat Input Capacity (MMBtu/hr)</th>
<th>Exhaust</th>
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<tr>
<td>Plant 4</td>
<td>245194</td>
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<td>Natural Gas</td>
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<td>Stack*</td>
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<td>Stack*</td>
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<td>Stack*</td>
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<td>8/23/2001</td>
<td>Natural Gas</td>
<td>0.35</td>
<td>Stack*</td>
</tr>
</tbody>
</table>

*The draw/temper furnace stack has not been assigned a stack ID number.

(qq) Three (3) natural gas-fired VET facility furnaces, identified as RZ1, RZ2 and RZ3, respectively, approved in year for construction in 2020, each with a maximum capacity of maximum capacity 0.4 MMBtu/hr, and venting outside.

(The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.8.1 Particulate Matter Limitations Except Lake County [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate (PM) emissions from the natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, emergency diesel generators, emergency stationary fire pumps, grinding and machining operations, shot blast, production welding, draw/temper furnaces and VET facility furnaces, each shall not exceed three hundredths (0.03) grains per dry standard cubic foot of exhaust air.

D.8.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee’s obligation with regard to the preventive maintenance plan required by this condition.
Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.8.3 Particulate Control

In order to comply with Condition D.8.1, the fabric filters for particulate control shall be in operation and control emissions from shot blasting at all times that the shot blasting units are in operation.
SECTION D.9 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Descriptions:

(i) Transmission Test Cell 55, identified as ETC55, permitted in 2013, consisting of two reciprocating diesel-fired engines, with an estimated maximum engine size of 4,000 hp each, exhausting to Stacks/Vents PTE93 and PTE94.

Under 40 CFR 63, Subpart ZZZZ, this operation is an affected source. The engine is considered an affected source under 40 CFR 60, Subpart IIII when a new engine is installed in the test cell and a test cell exemption does not apply.

(The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.9.1 Particulate Matter Limitations Except Lake County [326 IAC 6.5-1-2(a)]
Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate (PM) emissions from ETC55 shall not exceed three hundredths (0.03) grains per dry standard cubic foot of exhaust air.

D.9.2 PSD Minor Limit [326 IAC 2-2]
In order to render 326 IAC 2-2 not applicable to ETC55, the Permittee shall comply with the following:

(a) NOx emissions from diesel fuel fired reciprocating engines utilized in ETC55 shall be less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) CO emissions from diesel fuel fired reciprocating engines utilized in ETC55 shall be less than one-hundred (100) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits shall render 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to ETC55.

D.9.3 Nonattainment NSR Minor Limit [326 IAC 2-1.1-5]
In order to render to ensure compliance with 326 IAC 2-1.1-5, the Permittee shall comply with the following for ETC55:

SO₂ emissions from diesel fuel fired reciprocating engines utilized in ETC55 shall be less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit shall ensure compliance with 326 IAC 2-1.1-5 (Nonattainment NSR) for ETC55.

D.9.4 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1]
Pursuant to 326 IAC 7-1.1-2 (SO₂ Emissions Limitations), Sulfur Dioxide (SO₂) emissions from ETC55 shall not exceed five tenths (0.5) pounds per million Btu heat input.

D.9.5 Preventive Maintenance Plan [326 IAC 2-7-5(12)]
A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.
Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.9.6 NOx Emissions Determination

To comply with the NOx emissions limit in Condition D.9.2(a), the following equation shall be used:

\[ \text{NOx} = \left( \frac{\text{FU} \times D \times EF}{\text{FCR}} \right)_{\text{Engine} \ 1} + \left( \frac{\text{FU} \times D \times EF}{\text{FCR}} \right)_{\text{Engine} \ 2} \times 1 \text{ ton} / 2,000 \text{ lb} \]

Where:
- \( \text{NOx} \): NOx emissions (ton/month)
- \( \text{FU} \): Fuel Usage (gal/month)
- \( D \): Density of fuel (lb/gal)
- \( EF \): NOx Emission Factor (lb/hp-hr) (For each engine type used, the emission factor shall be the emission limitation from the applicable federal engine emission standards.)
- \( FCR \): Fuel Consumption Rate (lb fuel/hp-hr)

D.9.7 CO Emissions Determination

To comply with the CO emissions limit in Condition D.9.2(b), the following equation shall be used:

\[ \text{CO} = \left( \frac{\text{FU} \times D \times EF}{\text{FCR}} \right)_{\text{Engine} \ 1} + \left( \frac{\text{FU} \times D \times EF}{\text{FCR}} \right)_{\text{Engine} \ 2} \times 1 \text{ ton} / 2,000 \text{ lb} \]

Where:
- \( \text{CO} \): CO emissions (ton/month)
- \( \text{FU} \): Fuel Usage (gal/month)
- \( D \): Density of fuel (lb/gal)
- \( EF \): CO Emission Factor (lb/hp-hr) (For each engine type used, the emission factor shall be the emission limitation from the applicable federal engine emission standards.)
- \( FCR \): Fuel Consumption Rate (lb fuel/hp-hr)

D.9.8 SO2 Emissions Determination

To comply with the SO2 emissions limit in Condition D.9.3, the following equation shall be used:

\[ \text{SO2} = \left( \frac{\text{FU} \times D \times EF}{\text{FCR}} \right)_{\text{Engine} \ 1} + \left( \frac{\text{FU} \times D \times EF}{\text{FCR}} \right)_{\text{Engine} \ 2} \times 1 \text{ ton} / 2,000 \text{ lb} \]

Where:
- \( \text{SO2} \): SO2 emissions (ton/month)
- \( \text{FU} \): Fuel Usage (gal/month)
- \( D \): Density of fuel (lb/gal)
- \( EF \): SO2 Emission Factor (0.00405 lb SO2/hp-hr) (from AP-42, Table 3.4-1)
- \( FCR \): Fuel Consumption Rate (lb fuel/hp-hr)

D.9.9 Sulfur Dioxide Emissions and Sulfur Content

Compliance with Condition D.9.4 shall be determined utilizing one of the following options:

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input by:

(1) Providing vendor analysis of fuel delivered, if accompanied by a certification; or

(2) Analyzing the fuel sample to determine the sulfur content of the fuel via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Fuel samples may be collected from the fuel tank immediately after the fuel tank is filled and before any fuel is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or
(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

**Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

**D.9.10 Record Keeping Requirements**

(a) To document the compliance status with Condition D.9.2, the Permittee shall:

1. Maintain monthly records of the diesel fuel throughput, fuel density, fuel consumption rate, and the emission factors for NOx and CO for Engine 1 and Engine 2 in Test Cell ETC55.

2. Maintain records of NOx emissions on a monthly basis using the equation in Condition D.9.6.

3. Maintain records of CO emissions on a monthly basis using the equation in Condition D.9.7.

(b) To document the compliance status with Condition D.9.3, the Permittee shall:

1. Maintain monthly records of the diesel fuel throughput, fuel density, fuel consumption rate, and the emission factor for SO2 for Engine 1 and Engine 2 in Test Cell ETC55.


(c) To document the compliance status with Condition D.9.4, the Permittee shall maintain records in accordance with (1) through (6) below:

1. Calendar dates covered in the compliance determination period;

2. Actual diesel fuel usage since last compliance determination period and equivalent sulfur dioxide emissions;

3. A certification, signed by the owner or operator which is not necessarily the responsible official, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

4. Fuel supplier certifications.

5. The name of the fuel supplier; and

6. A statement from the fuel supplier that certifies the sulfur content of the diesel fuel.

(d) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required to be maintained by this condition.
D.9.11 Reporting Requirements

(a) If the Permittee is a member of IDEM's Environmental Stewardship Program (ESP) program, semi-annual summaries of the information to document the compliance status with Conditions D.9.2, D.9.3, D.9.6, D.9.7, and D.9.8 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the semi-annual period being reported.

(b) If the Permittee is no longer a member of IDEM's Environmental Stewardship Program (ESP) program, quarterly summaries of the information to document the compliance status with Conditions D.9.2, D.9.3, D.9.6, D.9.7, and D.9.8 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the calendar quarter being reported.

(c) Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The reports submitted by the Permittee do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
### Emission Unit Descriptions:

#### Insignificant Activities

(99) Twenty-five (25) carburizing, atmosphere, heat treat furnaces, each using methanol (supplemented with methane as needed) at a maximum usage rate of 60 gallons per day to produce carbon monoxide and hydrogen rich atmosphere, each equipped with a natural gas-fired tube burner or with electric coils to produce process heat, each equipped with an integral natural gas-fired flame curtain to prevent ambient air from entering the furnace when the outer door is opened, and each equipped with an integral pilot burner located at the effluent of the heat treat furnace vestibule to combust flammable gases (carbon monoxide and hydrogen) in the furnace exhaust, as follows:

<table>
<thead>
<tr>
<th>Location</th>
<th>Unit ID</th>
<th>Construction Year</th>
<th>Natural Gas Maximum Heat Input Capacities (MMBtu/hr)</th>
</tr>
</thead>
<tbody>
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<td></td>
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<td></td>
<td>Tube Burner</td>
</tr>
<tr>
<td>Plant 14</td>
<td>EU 301194</td>
<td>1995</td>
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</table>

*N/A = not applicable, since these furnaces are heated with electric coils.

Each of the carburizing, atmosphere, heat treat furnaces is equipped with an oil quench tank to cool the metal parts after heat treatment, using mineral oil-based or refined petroleum oil-based quench oil. The potential to emit volatile organic compounds (VOC) and hazardous air pollutants (HAP) from the quench oil tanks are negligible due to the low vapor pressure of the quench oils used.

(The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)
Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.10.1 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

D.10.2 Particulate Matter Limitations Except Lake County [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate (PM) emissions from each of the heat treat furnaces shall not exceed three hundredths (0.03) grains per dry standard cubic foot of exhaust air.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.10.3 Heat Treat Furnaces

In order to assure that the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) are not applicable to the 1995, 1996, 1998, 2000, and/or 2003 modifications, the Permittee shall comply with the following:

(a) Each integral pilot burner, which are each located at the effluent of the heat treat furnace vestibule, shall be in operation and control CO emissions from the respective heat treat furnace at all times when the respective heat treat furnace is in operation.

(b) Each integral flame curtain associated with a heat treat furnace shall be in operation at all times when the respective heat treat furnace outer door is open.

Compliance with these conditions shall assure that the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) are not applicable to the 1995, 1996, 1998, 2000, and/or 2003 modifications.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

D.10.4 Pilot Burner Flame and Carbon Monoxide Monitoring

In order to assure compliance with Condition D.10.3(a), the Permittee shall comply with the following:

(a) The Permittee shall calibrate and maintain carbon monoxide (CO) detectors directly associated with the heat treat furnaces within Plants 3, 6, 12, and 14. Each CO detector shall be connected to a shared control box (for that area) that activates an audio and visual alarm if the ambient CO levels exceeds 50 ppmv.

(b) Visual observations to detect a presence of flame at each of the integral pilot burners associated with the heat treat furnaces shall be performed for each batch in a heat treat furnace. The observations shall be taken during that part of the batch when the effluent of the heat treat furnace vestibule is vented to the integral pilot burner. If a condition exists which should result in a response step, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

(c) For the heat treat furnaces in Plant 12 (Unit IDs EU100055736, EU 237012, EU 237013, and EU 615955), the Permittee may comply with the following requirements as an alternative to complying with paragraph (b) of this condition:

(1) The Permittee shall calibrate and maintain flame rod detectors to detect the presence of a flame at each of the integral pilot burners associated with the heat treat furnaces in Plant 12 (Unit IDs EU100055736, EU 237012, EU 237013, and
EU 615955). Each flame rod detector shall activate an audio and visual alarm when the presence of a flame is not detected.

(2) The Permittee shall monitor each integral pilot burner associated with a heat treat furnace using a flame rod detect the presence of a flame at the pilot burner when the respective heat treat furnace is in operation. If a condition exists which should result in a response step, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.10.5 Record Keeping Requirements

(a) To document the compliance status with Conditions D.10.3(a) and D.10.4, the Permittee shall maintain the following records:

(1) Records for each occurrence when an audio and/or visual alarm is activated for a CO detector.

(2) Records of visual observations to detect a presence of flame at each of the integral pilot burners for each batch processed in a heat treat furnace. If a visual observation to detect a presence of flame is not taken on a given day, the Permittee shall include a record for that day why a visual observation to detect a presence of flame was not taken and the reason for the lack of a visual observation to detect a presence of flame (e.g., the heat treat furnace did not operate that day).

(3) Daily records of the number of batches processed in each of the heat treat furnaces each day.

(4) If the Permittee complies with Condition D.10.4(c) for the heat treat furnaces in Plant 12 (Unit IDs EU100055736, EU 237012, EU 237013, and EU 615955), the Permittee shall maintain records for each occurrence when an audio and/or visual alarm is activated for a flame rod detector.

(b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.
### SECTION D.11  EMISSIONS UNIT OPERATION CONDITIONS

#### Emission Unit Descriptions:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(m)</td>
<td>One (1) natural gas-fired boiler, identified as BLR 1, approved in 2018 for construction, with a maximum heat input capacity of 97.85 MMBtu/hr, equipped with low NOx Burner and flue gas recirculation system for NOx control and exhausting to stack #1. Under 40 CFR 60, Subpart Dc, this boiler is an affected source.</td>
</tr>
<tr>
<td>(n)</td>
<td>One (1) natural gas-fired boiler, identified as BLR 3, approved in 2018 for construction, with a maximum heat input capacity of 36.77 MMBtu/hr, equipped with low NOx Burner and flue gas recirculation system for NOx control and exhausting to stack #3. Under 40 CFR 60, Subpart Dc, this boiler is an affected source.</td>
</tr>
<tr>
<td>(o)</td>
<td>Three (3) natural gas-fired Boilers, identified as BLR 7, BLR 8 and BLR 9, respectively, approved in 2020 for construction, each capable of combusting only natural gas, with a maximum capacity of 2.36, 2.36 and 1.5 MMBtu/hr, exhausting out to stacks R1, R2 and R3, respectively. Under 40 CFR 60, Subpart Dc, these boilers are affected source.</td>
</tr>
</tbody>
</table>

#### Insignificant Activities

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(oo)</td>
<td>One (1) cooling tower, identified as CT1, consisting of 3 cells, approved in 2018 for construction, with a maximum water recirculation rate of 800 gallons per hour with maximum total dissolved solid content of 1,570 parts per million in the water, without control and exhausting outside.</td>
</tr>
<tr>
<td>(pp)</td>
<td>Two (2) induced draft cooling tower, identified as VCT1 and VCT2, respectively, approved in 2020 for construction, each with a maximum water recirculation rate of 3000 gallons per minute with maximum total dissolved solid content of 24,000 parts per million in the water, without control and exhausting outside.</td>
</tr>
</tbody>
</table>

(The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)

#### Emission Limitations and Standards [326 IAC 2-7-5(1)]

##### D.11.1 Particulate [326 IAC 6.5-1-2]

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>Pursuant to 326 IAC 6.5-1-2(b)(3), particulate emissions from the boilers BLR 1 and BLR 3, BLR 7, BLR 8 and BLR 9 shall not exceed 0.01 grains per dry standard cubic foot (dscf).</td>
</tr>
<tr>
<td>(b)</td>
<td>Pursuant to 326 IAC 6.5-1-2(a), particulate emissions from the cooling towers (CT1, VCT1 and VCT2) shall not exceed 0.03 grains per dry standard cubic foot (dscf).</td>
</tr>
</tbody>
</table>

##### D.11.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee’s obligation with regard to the preventive maintenance plan required by this condition.
SECTION D.12  EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description:

(p) One (1) shot blast unit, identified as SB1, constructed in 2019, with a maximum shot usage rate of 450 pounds per hour, using coal fired boiler slag as shot media, using dust collector filters DC1 as control, and exhausting inside.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.12.1 PSD Minor Limit [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable to the shot blast unit (SB1), the PM2.5 emissions from the shot blast unit (SB1) shall not exceed 2.26 pounds per hour.

Compliance with this limit will limit PM2.5 PTE of the shot blast unit (SB1) to less than 10 tons per twelve (12) consecutive month period and therefore, render the requirements of 326 IAC 2-2 (PSD) not applicable to the shot blast unit (SB1).

D.12.2 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a), particulate matter (PM) emissions from the shot blast unit (SB1) shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

D.12.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for this facility and any associated control device. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.12.4 Particulate Control

(a) In order to comply with Conditions D.12.1 and D.12.2, the dust collector filters (DC1) for particulate control shall be in operation and control emissions from the shot blast unit (SB1) at all times SB1 is in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.12.5 Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the shot blast unit (SB1). Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

D.12.6 Parametric Monitoring

The Permittee shall record the pressure drop across the dust collector filters (DC1) used in conjunction with SB1, at least once per day when SB1 is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.12.7 Record Keeping Requirements

(a) To document the compliance status with Condition D.12.6, the Permittee shall maintain daily records of the pressure drop across the baghouse. The Permittee shall include in its daily record when the pressure drop across the baghouse is not taken and the reason for the pressure drop was not taken (e.g. the process did not operate that day).

(b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.
SECTION E.1  NSPS

### Emission Unit Descriptions:

**(g)** One (1) natural gas-fired boiler, identified as Emission Unit ID BLR6, constructed in 2011, with a maximum heat input of 99 million Btu per hour, equipped with low-NOx burners and flue gas recirculation.

Under 40 CFR 60, Subpart Dc, this operation is an affected source.

**(m)** One (1) natural gas-fired boiler, identified as BLR 1, approved in 2018 for construction, with a maximum heat input capacity of 97.85 MMBtu/hr, equipped with low NOx Burner and flue gas recirculation system for NOx control and exhausting to stack #1.

Under 40 CFR 60, Subpart Dc, this boiler is an affected source.

**(n)** One (1) natural gas-fired boiler, identified as BLR 3, approved in 2018 for construction, with a maximum heat input capacity of 36.77 MMBtu/hr, equipped with low NOx Burner and flue gas recirculation system for NOx control and exhausting to stack #3.

Under 40 CFR 60, Subpart Dc, this boiler is an affected source.

(The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)

### New Source Performance Standard (NSPS) Requirements [326 IAC 2-7-5(1)]

**E.1.1 General Provision Relating to New Source Performance Standards [326 IAC 12-1]**

[40 CFR 60, Subpart A]

**(a)** Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, for emission unit(s) listed above, except when otherwise specified in 40 CFR Part 60, Subpart Dc.

**(b)** Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

**E.1.2 Small Industrial-Commercial Institutional Steam Generating Units NSPS [326 IAC 12]**

[40 CFR 60, Subpart Dc]

The Permittee shall comply with the following provisions of 40 CFR 60, Subpart Dc (included as Attachment A to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

**1)** 40 CFR 60.40c(a) and (b);

**2)** 40 CFR 60.41c;

**3)** 40 CFR 60.48c(a), (g), (i); and

**4)** 40 CFR 60.7
### Emission Unit Descriptions:

(c) Emission Unit ETC consists of the following twenty five (25) engineering development transmission test cells; 701, 704, 705, 706, 707, 709, 710, 711, 32N, 32S, 38N, 39N, 39S, 41N, 41S, 48N, 48S, 49N, 49S, 50N, 50S, 51N, 52N and 52S. The table below lists the fuel type and engine type that each cell is capable of accommodating based on the physical characteristics of each cell. Test cell 704 utilizes an oxidation catalyst system to control CO emissions.

<table>
<thead>
<tr>
<th>Test Cell ID</th>
<th>Construction Dates</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>Stack ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>701</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating or Gas Turbine</td>
<td>4000</td>
<td>PTE 057</td>
</tr>
<tr>
<td>704</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 065</td>
</tr>
<tr>
<td>705</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating or Gas Turbine</td>
<td>2400 for reciprocating; 4000 for gas turbine</td>
<td>PTE 067</td>
</tr>
<tr>
<td>706</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>4000</td>
<td>PTE 069</td>
</tr>
<tr>
<td>707</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 071</td>
</tr>
<tr>
<td>709</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 071</td>
</tr>
<tr>
<td>710</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 077</td>
</tr>
<tr>
<td>711</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 079</td>
</tr>
<tr>
<td>712</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 080</td>
</tr>
<tr>
<td>32N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 008</td>
</tr>
<tr>
<td>32S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 006</td>
</tr>
<tr>
<td>38N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>4000</td>
<td>PTE 011</td>
</tr>
<tr>
<td>39N</td>
<td>prior 1977 modified 1980's</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 018</td>
</tr>
<tr>
<td>39S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 020</td>
</tr>
<tr>
<td>41N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 023</td>
</tr>
<tr>
<td>41S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 021</td>
</tr>
<tr>
<td>48N</td>
<td>prior to 1977 modified 2020 for modification</td>
<td>Diesel, Natural Gas, Gasoline</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 040</td>
</tr>
<tr>
<td>48S</td>
<td>prior to 1977 modified 2020 for modification</td>
<td>Diesel, Natural Gas, Gasoline</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 041</td>
</tr>
<tr>
<td>49N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 086</td>
</tr>
<tr>
<td>49S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 087</td>
</tr>
<tr>
<td>50N</td>
<td>prior to 1977 modified 2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>700 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 093</td>
</tr>
<tr>
<td>50S</td>
<td>prior to 1977 modified 2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>1000 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 097</td>
</tr>
<tr>
<td>51N</td>
<td>prior to 1977 modified 2020 for modification</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>4000</td>
<td>PTE 084</td>
</tr>
</tbody>
</table>
All of the engines except gas turbine engines located in Test Cells 701 and 705 are affected sources under 40 CFR 63, Subpart ZZZZ. Any gas turbine engines in test cells 701 and 705 are considered affected sources under 40 CFR 60, Subpart KKKK when a new turbine is installed in the test cell and a test cell exemption does not apply. The diesel reciprocating engines in each of the test cells are considered affected sources under 40 CFR 60, Subpart IIII when a new diesel engine is installed in the test cell and a test cell exemption does not apply. The gasoline reciprocating engines in test cells 50N, 50S, 52N, and 52S are considered an affected source under 40 CFR 60, Subpart JJJJ when a new gasoline engine is installed in the test cell and a test cell exemption does not apply.

(d) Emission unit DTC consists of the following four (4) transmission reliability test cells, TC-107, TC-109, TC-111 and TC-112. All test cells were constructed in 1985. The following engines can be used in any one of the individual test cells mentioned above:

<table>
<thead>
<tr>
<th>Test Cell ID</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>Stack ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC-107</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 045</td>
</tr>
<tr>
<td>TC-109</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 043</td>
</tr>
<tr>
<td>TC-111</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 049</td>
</tr>
<tr>
<td>TC-112</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 050</td>
</tr>
</tbody>
</table>

Under 40 CFR 63, Subpart ZZZZ, these engines are each an affected source. The engines in each of the test cells are considered affected sources under 40 CFR 60, Subpart III when a new engine is installed in the test cell and a test cell exemption does not apply.

(e) Emission unit PTS14 consists of the following four (4) transmission test stands, identified as test stand O-2, O-24, O-25 and O-31. Test stands O-2, O-24, O-25 and O-31 were constructed in 1978, 1979, 1986, 1986, and 1984 respectively. The table below lists the fuel type and engine type that each stand is capable of accommodating based on the physical characteristics of each stand. Test stands O-2, and O-31 each utilize an oxidation catalyst system to control CO emissions.

<table>
<thead>
<tr>
<th>Test Stand ID</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>Stack ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>O-2</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>14038</td>
</tr>
<tr>
<td>O-24</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>600</td>
<td>14024</td>
</tr>
<tr>
<td>O-25</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>600</td>
<td>14023</td>
</tr>
<tr>
<td>O-31</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>14045</td>
</tr>
</tbody>
</table>
Under 40 CFR 63, Subpart ZZZZ, these engines are each an affected source. The engines in each of the test stands are considered affected sources under 40 CFR 60, Subpart III when a new engine is installed in the test stand and a test cell exemption does not apply.

(f) Transmission Test Cell 702, identified as Emission Unit ID ETC702, consisting of one (1) reciprocating engine firing diesel fuel, with an estimated maximum engine size of 4000 hp, and exhausting at Stack/ Vent IDs PTE062 and PTE062A. This emission unit can accommodate engines of greater than 600 horsepower. Constructed in 2002.

Under 40 CFR 63, Subpart ZZZZ, this operation is an affected source. The engine is considered an affected source under 40 CFR 60, Subpart III when a new engine is installed in the test cell and a test cell exemption does not apply.

(i) Transmission Test Cell 55, identified as ETC55, permitted in 2013, consisting of two reciprocating diesel-fired engines, with an estimated maximum engine size of 4,000 hp each, exhausting to Stacks/Vents PTE93 and PTE94.

Under 40 CFR 63, Subpart ZZZZ, this operation is an affected source. The engine is considered an affected source under 40 CFR 60, Subpart III when a new engine is installed in the test cell and a test cell exemption does not apply.

(j) Transmission Test Cell 53, identified as ETC53, approved in 2015 for construction, consisting of two reciprocating engines (53N and 53S) firing low sulfur diesel fuel (150 ppm or less), with an estimated maximum engine size of equal to or less than 1000 HP each and exhausting to Stack/Vents PTE95 and PTE96.

Under 40 CFR 63, Subpart ZZZZ, this operation is an affected source. The engine is considered an affected source under 40 CFR 60 Subpart III when a new diesel engine is installed in the test cell and a test cell exemption does not apply.

(k) One (1) diesel-fired emergency generator, approved in 2016 for construction, identified as Genset 1a, with a maximum power output of 2,965 HP (22.76 MMBtu/hr input), using low sulfur diesel (150 ppm sulfur) equipped with a diesel particulate filter, exhausting to stack G1a. [40 CFR 60, Subpart III] [40 CFR 63, Subpart ZZZZ]

(l) One (1) diesel-fired emergency generator, approved in 2016 for construction, identified as Genset 1b, with a maximum power output of 2,965 HP (22.76 MMBtu/hr input), using low sulfur diesel (150 ppm sulfur) equipped with a diesel particulate filter, exhausting to stack G1b. [40 CFR 60, Subpart III] [40 CFR 63, Subpart ZZZZ]

Insignificant Activities

(z) Emergency diesel generators not exceeding 1600 horsepower.

(1) one (1) 1490 hp diesel emergency generator located in the Powerhouse courtyard.

(2) one (1) 490 hp diesel emergency generator located in Plant 7.

(3) one (1) 415 hp diesel emergency generator located in Plant 12/14.

Under 40 CFR 60, Subpart III, these operations are each an affected source. Under 40 CFR 63, Subpart ZZZZ, these operations are each an affected source.

(aa) One (1) diesel-fired emergency stationary fire pump engine, identified as Engine 1, constructed in 2012 and permitted in 2017, with a maximum heat input of 2.52 MMBtu/hr.

Under 40 CFR 63, Subpart ZZZZ, Engine 1 is considered an affected source.
Under 40 CFR 60, Subpart III, Engine 1 is considered an affected facility.  
(The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)

New Source Performance Standard (NSPS) Requirements [326 IAC 2-7-5(1)]


(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, for the emission unit(s) listed above, except when otherwise specified in 40 CFR Part 60, Subpart III.

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue,
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.2.2 Standard of Performance for Stationary Compression Ignition Internal Combustion Engines [326 IAC 12] [40 CFR 60, Subpart III]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart III (included as Attachment B to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above.

(a) Diesel emergency generators:

   (1) 40 CFR 60.4200(a)(2)(i), (a)(4), (c), and (d);
   (2) 40 CFR 60.4205(b) and (e);
   (3) 40 CFR 60.4206;
   (4) 40 CFR 60.4207(b);
   (5) 40 CFR 60.4209;
   (6) 40 CFR 60.4211(a), (c), (f)(1), (f)(2)(i), and (f)(3);
   (7) 40 CFR 60.4214(b) and (c);
   (8) 40 CFR 60.4218;
   (9) 40 CFR 60.4219;
   (10) Table 5; and
   (11) Table 8.

(b) Test cells ETC, DTC, PTS14, 702, ETC55, and ETC53:

   (1) 40 CFR 60.4200(a)(2)(i), (a)(4), (b), and (d);
   (2) 40 CFR 60.4204(a), (b), and (d);
   (3) 40 CFR 60.4206;
   (4) 40 CFR 60.4207(b);
   (5) 40 CFR 60.4209(b);
   (6) 40 CFR 60.4211(a), (b), and (c);
   (7) 40 CFR 60.4214(a) and (c);
   (8) 40 CFR 60.4218;
   (9) 40 CFR 60.4219;
   (10) Table 1;
   (11) Table 5; and
   (12) Table 8.
(c) Engine 1:

(1) 40 CFR 60.4200(a)(2)(ii) and (a)(4);
(2) 40 CFR 60.4205(e);
(3) 40 CFR 60.4206;
(4) 40 CFR 60.4207(b);
(5) 40 CFR 60.4208(f), (g), (h), and (i);
(6) 40 CFR 60.4209(a);
(7) 40 CFR 60.4210(i);
(8) 40 CFR 60.4211(a), (c), (f), and (g)(2);
(9) 40 CFR 60.4214(b) and (d);
(10) 40 CFR 60.4218;
(11) 40 CFR 60.4219;
(12) Table 4 to 40 CFR 60, Subpart IIII;
(13) Table 5 to 40 CFR 60, Subpart IIII; and
(14) Table 8 to 40 CFR 60, Subpart IIII.
### Emission Unit Descriptions:

#### Insignificant Activities:

(b) Fuel dispensing activities, including the following:

1. A gasoline fuel transfer and dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day, such and filling storage tanks having a storage capacity equal to or less than ten thousand five hundred (10,500) gallons. Such storage tanks may be in a fixed location or on mobile equipment; including:

   - **(A)** One (1) above ground storage tank, with a maximum storage capacity of 500 gallons.
   - **(B)** One (1) above ground storage tank, approved in 2017 for construction, with a maximum storage capacity of 10,000 gallons.

Under 40 CFR 63, Subpart CCCCCC, this operation is an affected source.

(The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)

### National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements

#### [326 IAC 2-7-5(1)]

**E.3.1 General Provision Relating National Emission Standards for Hazardous Air Pollutants**

(a) Pursuant to 40 CFR Part 63.1, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, for the emission unit(s) listed above, except when otherwise specified in 40 CFR Part 63, Subpart CCCCCC.

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue,
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

#### [326 IAC 20-1] [40 CFR 63, Subpart A]

**E.3.2 Standard National Emission Standards for Hazardous Air Pollutants for Gasoline Dispensing Facilities**

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart CCCCCC (included as Attachment C to the operating permit), for the emission units listed above:

1. 40 CFR 63.11110;
2. 40 CFR 63.11111(a), (b), (e), (h), (i), and (j);
3. 40 CFR 63.11112(a) and (d);
4. 40 CFR 63.11113(b) and (c);
5. 40 CFR 63.11115;
6. 40 CFR 63.11116;
7. 40 CFR 63.11125(d);
8. 40 CFR 63.11126(b);
9. 40 CFR 63.11130;
(10) 40 CFR 63.11131; and
(11) 40 CFR 63.11132.
SECTION E.4  NESHAP

**Insignificant Activities**

 hh) The following tanks involved in plating operations:

(5) One manganese phosphate tank (Dept. 1492 tank F3)

Under 40 CFR 63, Subpart WWWW, this operation is an affected source.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

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**National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements**

**[326 IAC 2-7-5(1)]**

E.4.1 General Provision Relating to National Emission Standards for Hazardous Air Pollutants [326 IAC 20-1] [40 CFR 63, Subpart A]

(a) Pursuant to 40 CFR 63.1, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, for the emission unit(s) listed above, except when otherwise specified in 40 CFR Part 63, Subpart WWWW.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue,
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.4.2 National Emission Standards for Hazardous Air Pollutants for Plating and Polishing Operations [40 CFR 63, Subpart WWWW]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart WWWW (included as Attachment D to the operating permit), for the emissions unit(s) listed above:

(1) 40 CFR 63.11504(a)(1)(iii);
(2) 40 CFR 63.11505(a) and (b);
(3) 40 CFR 63.11506(a);
(4) 40 CFR 63.11507(a) and (g);
(5) 40 CFR 63.11508(a), (b), (c)(1) and (2), and (d);
(6) 40 CFR 63.11509(a)(1)-(3), (b), (c)(1), (c)(2)(i), (c)(7), (d), (e), and (f);
(7) 40 CFR 63.11510;
(8) 40 CFR 63.11511;
(9) Table 1.
SECTION E.5 NSPS

Emission Unit Descriptions:

(c) Emission Unit ETC consists of the following development transmission test cells:

<table>
<thead>
<tr>
<th>Test Cell ID</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>Stack ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>701</td>
<td>Diesel</td>
<td>Reciprocating or Gas Turbine</td>
<td>4000</td>
<td>PTE 057</td>
</tr>
<tr>
<td>705</td>
<td>Diesel</td>
<td>Reciprocating or Gas Turbine</td>
<td>2400 for reciprocating; 4000 for gas turbine</td>
<td>PTE 067</td>
</tr>
</tbody>
</table>

Any gas turbine engines in test cells 701 and 705 are considered affected sources under 40 CFR 60, Subpart KKKK when a new turbine is installed in the test cell and a test cell exemption does not apply.

(The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)

This section only applies at times when a turbine engine is installed in the test cell and a test cell exemption does not apply.

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.5.1 General Provisions Relating to New Source Performance Standards (NSPS)

[40 CFR 60, Subpart A] [326 IAC 12-1]

Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, for the emission unit(s) listed above, except when otherwise specified in 40 CFR 60, Subpart KKKK.

E.5.2 Stationary Combustion Turbines NSPS Requirements [40 CFR 60, Subpart KKKK] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR 60, Subpart KKKK (included as Attachment E to the operating permit), which are incorporated by reference as 326 IAC 12 for the emission unit(s) listed above:

1. 40 CFR 60.4305
2. 40 CFR 60.4315
3. 40 CFR 60.4320(a)
4. 40 CFR 60.4325
5. 40 CFR 60.4330(a)
6. 40 CFR 60.4333
7. 40 CFR 60.4375
8. 40 CFR 60.4395
9. 40 CFR 60.4420
Emission Unit Descriptions:

(c) Emission Unit ETC consists of the following twenty five (25) engineering development transmission test cells; 701, 704, 705, 706, 707, 709, 710, 711, 712, 32N, 32S, 38N, 39N, 39S, 41N, 41S, 48N, 48S, 49N, 49S, 50N, 50S, 51N, 52N and 52S. The table below lists the fuel type and engine type that each cell is capable of accommodating based on the physical characteristics of each cell. Test cell 704 utilizes an oxidation catalyst system to control CO emissions.

<table>
<thead>
<tr>
<th>Test Cell ID</th>
<th>Construction Dates</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>Stack ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>701</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating or Gas Turbine</td>
<td>4000</td>
<td>PTE 057</td>
</tr>
<tr>
<td>704</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 065</td>
</tr>
<tr>
<td>705</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating or Gas Turbine</td>
<td>2400 for reciprocating; 4000 for gas turbine</td>
<td>PTE 067</td>
</tr>
<tr>
<td>706</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>4000</td>
<td>PTE 069</td>
</tr>
<tr>
<td>707</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 071</td>
</tr>
<tr>
<td>709</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 075</td>
</tr>
<tr>
<td>710</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 077</td>
</tr>
<tr>
<td>711</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 079</td>
</tr>
<tr>
<td>712</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 080</td>
</tr>
<tr>
<td>32N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 008</td>
</tr>
<tr>
<td>32S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 006</td>
</tr>
<tr>
<td>38N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>4000</td>
<td>PTE 011</td>
</tr>
<tr>
<td>39N</td>
<td>prior 1977 modified 1980's</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 018</td>
</tr>
<tr>
<td>39S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 020</td>
</tr>
<tr>
<td>41N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 023</td>
</tr>
<tr>
<td>41S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 021</td>
</tr>
<tr>
<td>48N</td>
<td>prior 1977 (approved in 2020 for modification)</td>
<td>Diesel, Natural Gas, Gasoline</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 040</td>
</tr>
<tr>
<td>48S</td>
<td>prior 1977 (approved in 2020 for modification)</td>
<td>Diesel, Natural Gas, Gasoline</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 041</td>
</tr>
<tr>
<td>49N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 086</td>
</tr>
<tr>
<td>49S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 087</td>
</tr>
<tr>
<td>50N</td>
<td>prior to 1977 modified 2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 700 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 093</td>
</tr>
<tr>
<td>50S</td>
<td>prior to 1977 modified 2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 1000 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 097</td>
</tr>
<tr>
<td>51N</td>
<td>prior 1977 (approved in 2020 for modification)</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>4000</td>
<td>PTE 084</td>
</tr>
<tr>
<td>52N</td>
<td>prior to 1977 modified 2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 700 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 098</td>
</tr>
</tbody>
</table>
All of the engines except gas turbine engines located in Test Cells 701 and 705 are affected sources under 40 CFR 63, Subpart ZZZZ. Any gas turbine engines in test cells 701 and 705 are considered affected sources under 40 CFR 60, Subpart KKKK when a new turbine is installed in the test cell and a test cell exemption does not apply. The diesel reciprocating engines in each of the test cells are considered affected sources under 40 CFR 60, Subpart IIII when a new diesel engine is installed in the test cell and a test cell exemption does not apply. The gasoline reciprocating engines in test cells 50N, 50S, 52N, and 52S are considered an affected source under 40 CFR 60, Subpart JJJJ when a new gasoline engine is installed in the test cell and a test cell exemption does not apply.

(d) Emission unit DTC consists of the following four (4) transmission reliability test cells, TC-107, TC-109, TC-111 and TC-112. All test cells were constructed in 1985. The following engines can be used in any one of the individual test cells mentioned above:

<table>
<thead>
<tr>
<th>Test Cell ID</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>Stack ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC-107</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 045</td>
</tr>
<tr>
<td>TC-109</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 043</td>
</tr>
<tr>
<td>TC-111</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 049</td>
</tr>
<tr>
<td>TC-112</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 050</td>
</tr>
</tbody>
</table>

Under 40 CFR 63, Subpart ZZZZ, these engines are each an affected source. The engines in each of the test cells are considered affected sources under 40 CFR 60, Subpart IIII when a new engine is installed in the test cell and a test cell exemption does not apply.

(e) Emission unit PTS14 consists of the following four (4) transmission test stands, identified as test stand O-2, O-24, O-25 and O-31. Test stands O-2, O-24, O-25 and O-31 were constructed in 1978, 1979, 1986, 1986, and 1984 respectively. The table below lists the fuel type and engine type that each stand is capable of accommodating based on the physical characteristics of each stand. Test stands O-2, O-24 and O-31 each utilize an oxidation catalyst system to control CO emissions.

<table>
<thead>
<tr>
<th>Test Stand ID</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>Stack ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>O-2</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>14038</td>
</tr>
<tr>
<td>O-24</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>600</td>
<td>14024</td>
</tr>
<tr>
<td>O-25</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>600</td>
<td>14023</td>
</tr>
<tr>
<td>O-31</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>14045</td>
</tr>
</tbody>
</table>

Under 40 CFR 63, Subpart ZZZZ, these engines are each an affected source. The engines in each of the test stands are considered affected sources under 40 CFR 60, Subpart IIII when a new engine is installed in the test stand and a test cell exemption does not apply.
Transmission Test Cell 702, identified as Emission Unit ID ETC702, consisting of one (1) reciprocating engine firing diesel fuel, with an estimated maximum engine size of 4000 hp, and exhausting at Stack/ Vent IDs PTE062 and PTE062A. This emission unit can accommodate engines of greater than 600 horsepower. Constructed in 2002.

Under 40 CFR 63, Subpart ZZZZZ, this operation is an affected source. The engine is considered an affected source under 40 CFR 60, Subpart IIII when a new engine is installed in the test cell and a test cell exemption does not apply.

Transmission Test Cell 55, identified as ETC55, permitted in 2013, consisting of two reciprocating diesel-fired engines, with an estimated maximum engine size of 4,000 hp each, exhausting to Stacks/Vents PTE062 and PTE062A.

Under 40 CFR 63, Subpart ZZZZZZ, this operation is an affected source. The engine is considered an affected source under 40 CFR 60, Subpart IIII when a new engine is installed in the test cell and a test cell exemption does not apply.

Transmission Test Cell 53, identified as ETC53, approved in 2015 for construction, consisting of two reciprocating engines (53N and 53S) firing low sulfur diesel fuel (150 ppm or less), with an estimated maximum engine size of equal to or less than 1000 HP each and exhausting to Stack/Vents PTE95 and PTE96.

Under 40 CFR 63, Subpart ZZZZZ, this operation is an affected source. The engine is considered an affected source under 40 CFR 60, Subpart IIII when a new diesel engine is installed in the test cell and a test cell exemption does not apply.

One (1) diesel-fired emergency generator, approved in 2016 for construction, identified as Genset 1a, with a maximum power output of 2,965 HP (22.76 MMBtu/hr input), using low sulfur diesel (150 ppm sulfur) equipped with a diesel particulate filter, exhausting to stack G1a.

Under 40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZZ]

One (1) diesel-fired emergency generator, approved in 2016 for construction, identified as Genset 1b, with a maximum power output of 2,965 HP (22.76 MMBtu/hr input), using low sulfur diesel (150 ppm sulfur) equipped with a diesel particulate filter, exhausting to stack G1b.

Under 40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZZ]

Insignificant Activities

Emergency diesel generators not exceeding 1600 horsepower.

1. one (1) 1490 hp diesel emergency generator located in the Powerhouse courtyard.

2. one (1) 490 hp diesel emergency generator located in Plant 7.

3. one (1) 415 hp diesel emergency generator located in Plant 12/14.

Under 40 CFR 60, Subpart IIII, these operations are each an affected source. Under 40 CFR 63, Subpart ZZZZZ, these operations are each an affected source.

One (1) diesel-fired emergency stationary fire pump engine, identified as Engine 1, constructed in 2012 and permitted in 2017, with a maximum heat input of 2.52 MMBtu/hr.

Under 40 CFR 63, Subpart ZZZZZ, Engine 1 is considered an affected source.

Under 40 CFR 60, Subpart IIII, Engine 1 is considered an affected facility.

(The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)
National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

E.6.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [326 IAC 20-1] [40 CFR 63, Subpart A]

(a) Pursuant to 40 CFR 63.1, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR 63, Subpart ZZZZ.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana  46204-2251

E.6.2 Stationary Reciprocating Internal Combustion Engines NESHAP [326 IAC 20-82] [40 CFR 63, Subpart ZZZZ]

The Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ (included as Attachment F to the operating permit), which are incorporated by reference as 326 IAC 20-82, for the emission unit(s) listed above:

(a) The Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ when a new stationary RICE, defined as a RICE that commenced construction on or after June 12, 2006 pursuant to 40 CFR 63.6590(a)(2)(iii), is installed and operated in a test cell, and the test cell exemption does not apply:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585;
(3) 40 CFR 63.6590(a)(2)(iii), and (c)(1);
(4) 40 CFR 63.6595 (a)(7);
(5) 40 CFR 63.6665;
(6) 40 CFR 63.6670; and
(7) 40 CFR 63.6675;

(b) The Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ when a diesel-fired, nonemergency, existing stationary RICE, defined as a RICE that commenced construction prior to June 12, 2006 pursuant to 40 CFR 63.6590(a)(1)(iii), with a power output of less than or equal to 300 HP, is installed and operated in a test cell, and the test cell exemption does not apply:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a), (c), (d), and (e);
(3) 40 CFR 63.6590(a)(1)(iii);
(4) 40 CFR 63.6595(a)(1) and (c);
(5) 40 CFR 63.6603(a);
(6) 40 CFR 63.6605;
(7) 40 CFR 63.6612;
(8) 40 CFR 63.6625(e)(4), (h), and (i);
(9) 40 CFR 63.6640(a) and (b);
(10) 40 CFR 63.6645(a)(2);
(11) 40 CFR 63.6655(e)(3);
(12) 40 CFR 63.6660;
(13) 40 CFR 63.6665;
(14) 40 CFR 63.6670;
(15) 40 CFR 63.6675;
(16) Table 2d (Item 1); and
(17) Table 8.

(c) The Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ when a diesel-fired, nonemergency, existing stationary RICE, defined as a RICE that commenced construction prior to June 12, 2006 pursuant to 40 CFR 63.6590(a)(1)(iii), with a power output greater than 500 HP, is installed and operated in a test cell, and the test cell exemption does not apply:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a), (c), (d), and (e);
(3) 40 CFR 63.6590(a)(1)(iii);
(4) 40 CFR 63.6595(a)(1) and (c);
(5) 40 CFR 63.6603(a), (d) and (e);
(6) 40 CFR 63.6604(a);
(7) 40 CFR 63.6605;
(8) 40 CFR 63.6612;
(9) 40 CFR 63.6615;
(10) 40 CFR 63.6620(a), (b), (d), (e), (f), (g), (h), and (i);
(11) 40 CFR 63.6625(a), (b), (g), and (h);
(12) 40 CFR 63.6630(a), (b), and (c);
(13) 40 CFR 63.6635;
(14) 40 CFR 63.6640(a), (b), and (e);
(15) 40 CFR 63.6645(a)(2), (g), (h), and (i);
(16) 40 CFR 63.6650(a), (b), (c), (d), (e), and (f);
(17) 40 CFR 63.6655(a), (b), (d), and (e);
(18) 40 CFR 63.6665;
(19) 40 CFR 63.6670;
(20) 40 CFR 63.6675;
(21) Table 2b (item 2 and 3);
(22) Table 2d (item 3);
(23) Table 3 (item 4);
(24) Table 4 (item 1 and 3);
(25) Table 5 (item 1, 2, 3, 4, 5, and 6);
(26) Table 6 (item 3, 10, and 11); and
(27) Table 8.

E.6.3 Stationary Reciprocating Internal Combustion Engines NESHAP [326 IAC 20-82]
[40 CFR 63, Subpart ZZZZ]

Pursuant to 40 CFR 63, Subpart ZZZZ, the Permittee shall comply with the provisions of 40 CFR 63, Subpart ZZZZ (included as Attachment F of this permit), which are incorporated as 326 IAC 20-82, for the emergency generators, as follows:

(a) The Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ when a compression ignition, emergency, new stationary RICE, defined as a RICE that commenced construction on or after June 12, 2006 pursuant to 40 CFR 63.6590(a)(2)(iii) is installed:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a), (c), and (e);
(3) 40 CFR 63.6590(a)(2)(iii) and (c)(1);
(4) 40 CFR 63.6595(a)(6), (a)(7), and (c);
(5) 40 CFR 63.6605;
(6) 40 CFR 63.6650(f);
(7) 40 CFR 63.6665; 
(8) 40 CFR 63.6670; 
(9) 40 CFR 63.6675; and 
(10) Table 8.

(b) The Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ when a compression ignition, emergency, existing stationary RICE, defined as a RICE that commenced construction before June 12, 2006 pursuant to 40 CFR 63.6590(a)(1)(iii) is installed:

(1) 40 CFR 63.6580; 
(2) 40 CFR 63.6585(a), (c), and (e); 
(3) 40 CFR 63.6590(a)(1)(iii); 
(4) 40 CFR 63.6595(a)(1); 
(5) 40 CFR 63.6603(a); 
(6) 40 CFR 63.6605; 
(7) 40 CFR 63.6625(e)(5), (f), (h), and (i); 
(8) 40 CFR 63.6640(a), (b), (e), (f)(1), (f)(2)(i), and (f)(4); 
(9) 40 CFR 63.6645(a)(5); 
(10) 40 CFR 63.6650(f); 
(11) 40 CFR 63.6655(d) and (e)(2); 
(12) 40 CFR 63.6660; 
(13) 40 CFR 63.6665; 
(14) 40 CFR 63.6670; 
(15) 40 CFR 63.6675; 
(16) Table 2d (item 4); and 
(17) Table 6 (item 9).
### SECTION E.7 NSPS

#### Emission Unit Descriptions:

(c) Emission Unit ETC consists of the following development transmission test cells:

<table>
<thead>
<tr>
<th>Test Cell ID</th>
<th>Construction Dates</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>Stack ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>50N</td>
<td>2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 700 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 093</td>
</tr>
<tr>
<td>50S</td>
<td>2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 1000 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 097</td>
</tr>
<tr>
<td>52N</td>
<td>2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 700 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 098</td>
</tr>
<tr>
<td>52S</td>
<td>2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 1000 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 099</td>
</tr>
<tr>
<td>45</td>
<td>approved in 2020 for construction</td>
<td>diesel, natural gas, gasoline and propane</td>
<td>Reciprocating</td>
<td>4000</td>
<td>PTE 057</td>
</tr>
</tbody>
</table>

All of the engines except gas turbine engines located in Test Cells 701 and 705 are affected sources under 40 CFR 63, Subpart ZZZZ. Any gas turbine engines in test cells 701 and 705 are considered affected sources under 40 CFR 60, Subpart KKKK when a new turbine is installed in the test cell and a test cell exemption does not apply. The diesel reciprocating engines in each of the test cells are considered affected sources under 40 CFR 60, Subpart IIII when a new diesel engine is installed in the test cell and a test cell exemption does not apply. The gasoline reciprocating engines in test cells 50N, 50S, 52N, and 52S are considered an affected source under 40 CFR 60, Subpart JJJJ when a new gasoline engine is installed in the test cell and a test cell exemption does not apply.

(The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)

This section only applies at times when a new gasoline or natural gas engine is installed in the test cell and a test cell exemption does not apply.

### New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.7.1 General Provisions Relating to Standards of Performance under 40 CFR Part 60 [326 IAC 12-1] [40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the units as described in this section except when otherwise specified in 40 CFR Part 60, Subpart JJJJ.
(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue,
MC 61-53 IGCN 1003
Indianapolis, Indiana  46204-2251

E.7.2 Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
[326 IAC 12] [40 CFR 60, Subpart JJJJ]

The Permittee shall comply with the provisions of 40 CFR 60, Subpart JJJJ (included as Attachment G to the operating permit), which are incorporated by reference in 326 IAC 12, for the emissions unit(s) listed above:

When combusting natural gas or gasoline

(1) 40 CFR 60.4230(a)(4), (a)(6), (b), (d), and (e);
(2) 40 CFR 60.4233(a), (b), (d), (e), (f)(1 through 4), and (h);
(3) 40 CFR 60.4234;
(4) 40 CFR 60.4235;
(5) 40 CFR 60.4243(a)(1), (b)(1), (e), and (g);
(6) 40 CFR 60.4245(a);
(7) 40 CFR 60.4246;
(8) 40 CFR 60.4248;
(9) Table 1; and
(10) Table 3.
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  
PART 70 OPERATING PERMIT  
CERTIFICATION

Source Name: Allison Transmission, Inc.  
Source Address: One Allison Way, Indianapolis, Indiana 46222  
Part 70 Permit No.: T097-41322-00310

<table>
<thead>
<tr>
<th>This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please check what document is being certified:</td>
</tr>
<tr>
<td>□ Annual Compliance Certification Letter</td>
</tr>
<tr>
<td>□ Test Result (specify) ____________________________________________________________</td>
</tr>
<tr>
<td>□ Report (specify) ________________________________________________________________</td>
</tr>
<tr>
<td>□ Notification (specify) ___________________________________________________________</td>
</tr>
<tr>
<td>□ Affidavit (specify) _____________________________________________________________</td>
</tr>
<tr>
<td>□ Other (specify) ________________________________________________________________</td>
</tr>
</tbody>
</table>

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:  
Printed Name:  
Title/Position:  
Phone:  
Date:
PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Allison Transmission, Inc.
Source Address: One Allison Way, Indianapolis, Indiana 46222
Part 70 Permit No.: T097-41322-00310

This form consists of 2 pages       Page 1 of 2

- This is an emergency as defined in 326 IAC 2-7-1(12)
  - The Permittee must notify the Office of Air Quality (OAQ), within four (4) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
  - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency:

Describe the cause of the Emergency:
If any of the following are not applicable, mark N/A

<table>
<thead>
<tr>
<th>Date/Time Emergency started:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date/Time Emergency was corrected:</td>
</tr>
<tr>
<td>Was the facility being properly operated at the time of the emergency?</td>
</tr>
<tr>
<td>Type of Pollutants Emitted: TSP, PM-10, SO2, VOC, NOx, CO, Pb, other:</td>
</tr>
<tr>
<td>Estimated amount of pollutant(s) emitted during emergency:</td>
</tr>
<tr>
<td>Describe the steps taken to mitigate the problem:</td>
</tr>
<tr>
<td>Describe the corrective actions/response steps taken:</td>
</tr>
<tr>
<td>Describe the measures taken to minimize emissions:</td>
</tr>
<tr>
<td>If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:</td>
</tr>
</tbody>
</table>

Form Completed by: ________________________________________________
Title / Position: ____________________________________________________
Date: ____________________________________________________________
Phone: ____________________________________________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
Compliance and Enforcement Branch

Part 70 ESP Semi-Annual Report

Source Name: Allison Transmission, Inc. - Speedway Main Campus  
Source Address: One Allison Way, Mail Code: M-29, Indianapolis Indiana 46222  
Part 70 Permit No.: T097-41322-00310  
Facility (Condition): BLR 4 and BLR 5  
Parameter: PM emissions (Condition D.1.1(b))  
Limit: Particulate (PM) emissions from emission units BLR 4 and BLR 5 shall not exceed 39.3 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

<table>
<thead>
<tr>
<th>Month</th>
<th>Type of Fuel</th>
<th>Amount combusted this month (Mms)</th>
<th>Amount combusted in the previous 11 months (Mms)</th>
<th>PM Emission Factor (lbs/Mms)</th>
<th>Monthly PM Emissions (tons/month)</th>
<th>Twelve month sum of PM Emissions (tons/12 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas</td>
<td>Natural Gas</td>
<td>Natural Gas</td>
<td>Natural Gas</td>
<td>Natural Gas</td>
<td>Natural Gas</td>
<td>Natural Gas</td>
</tr>
</tbody>
</table>

☐ No deviation occurred in this semi-annual period.  
☐ Deviation/s occurred in this semi-annual period.  
Deviation has been reported on: ____________________________

Submitted by: ________________________________________________

Title / Position: ________________________________________________

Signature: ____________________________________________________

Date: _________________________________________________________

Phone: _________________________________________________________
### Part 70 ESP Semi-Annual Report

**Source Name:** Allison Transmission, Inc. - Speedway Main Campus  
**Source Address:** One Allison Way, Mail Code: M-29, Indianapolis Indiana 46222  
**Part 70 Permit No.:** T097-41322-00310  
**Facility (Condition):** Emission Unit ETC Test Cell 39N (Condition D.2.3(a))  
**Parameter:** Diesel fuel usage; limit the potential to emit NOx in Test Cell 39N to less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

**Limit:** The input of diesel fuel to reciprocating engines utilized in Test Cell Stand 39N shall be less than 182,481 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. For the purposes of determining compliance, each gallon of diesel fuel burned in reciprocating engines that are equal to or less than 600 horsepower shall be equivalent to one and thirty seven hundredths (1.378) gallons of diesel fuel burned in reciprocating engines that are greater than 600 horsepower.

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Year</th>
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<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>This Month</th>
<th>Previous 11 Months</th>
<th>12 Month Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Diesel fuel usage in engines &gt; 600 hp (gal)</td>
<td>Equivalent gallons in engines ≤ 600 hp (gal x 1.378)</td>
<td>Diesel fuel usage in engines &gt; 600 hp (gal)</td>
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</table>

- **No deviation occurred in this semi-annual period.**
- **Deviation/s occurred in this semi-annual period.**  
  Deviation has been reported on: ______________________

Submitted by: ____________________________________________________________  
Title / Position: ___________________________________________________________  
Signature: ________________________________________________________________  
Date: ___________________________________________________________________  
Phone: __________________________________________________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  

Part 70 ESP Semi-Annual Report  

Test Cell 50N, 52N, 50S, and 52S VOC Emissions  

Source Name: Allison Transmission, Inc. - Speedway Main Campus  
Source Address: One Allison Way, Indianapolis, Indiana  
Part 70 Permit No.: T097-41322-00310  
Facility (Condition): Test Cells 50N, 52N, 50S, and 52S (Condition D.2.3(b)(1))  
Parameter: VOC emissions  
Limit: Combined VOC emissions from test cells 50N, 52N, 50S, and 52S shall be less than 40.0 tons per twelve consecutive month period, with compliance determined at the end of each month.  

Quarter: __________________ Year: ________________  

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VOC Emissions This Month (tons)</td>
<td>VOC Emissions Previous 11 Months (tons)</td>
<td>VOC Emissions 12 Month Total (tons)</td>
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</tbody>
</table>

☐ No deviation occurred in this semi-annual period.  
☐ Deviation/s occurred in this semi-annual period.  
Deviation has been reported on: ____________________________

Submitted by: ____________________________________________
Title / Position: _________________________________________
Signature: ______________________________________________
Date: __________________________________________________
Phone: _________________________________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 ESP Semi-Annual Report

Test Cell 50N, 52N, 50S, and 52S NOx Emissions

Source Name: Allison Transmission, Inc. - Speedway Main Campus
Source Address: One Allison Way, Indianapolis, Indiana
Part 70 Permit No.: T097-41322-00310
Facility (Condition): Test Cells 50N, 52N, 50S, and 52S (Condition D.2.3(b)(2))
Parameter: NOx emissions
Limit: Combined NOx emissions from test cells 50N, 52N, 50S, and 52S shall be less than 40.0 tons per twelve consecutive month period, with compliance determined at the end of each month.

<table>
<thead>
<tr>
<th>QUARTER:</th>
<th>YEAR:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NOx Emissions This Month (tons)</td>
<td>NOx Emissions Previous 11 Months (tons)</td>
<td>NOx Emissions 12 Month Total (tons)</td>
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</table>

- No deviation occurred in this semi-annual period.
- Deviation/s occurred in this semi-annual period.
  Deviation has been reported on: _____________________________

Submitted by: ________________________________________________
Title / Position: ______________________________________________
Signature: ____________________________________________________
Date: ________________________________________________________
Phone: _______________________________________________________

[Checkboxes for No deviation or Deviation]
### Part 70 ESP Semi-Annual Report

**Source Name:** Allison Transmission, Inc. - Speedway Main Campus  
**Source Address:** One Allison Way, Mail Code: M-29, Indianapolis Indiana 46222  
**Part 70 Permit No.:** T097-41322-00310  
**Facility (Condition):** Emission Unit DTC (TC-107, TC-109, TC-111 and TC-112) (Condition D.3.2)  
**Parameter:** Combined diesel fuel usage; limit the combined potential to emit NOx in Test Cells TC-107, TC-109, TC-111 and TC-112 to less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.  
**Limit:** The combined input of diesel fuel to reciprocating engines utilized in Test Cells TC-107, TC-109, TC-111 and TC-112 shall be less than 182,481 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. For the purposes of determining compliance, each gallon of diesel fuel burned in reciprocating engines that are equal to or less than 600 horsepower shall be equivalent to one and thirty seven hundredths (1.378) gallons of diesel fuel burned in reciprocating engines that are greater than 600 horsepower.

<table>
<thead>
<tr>
<th>Quarter:</th>
<th>Year:</th>
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<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel fuel usage in engines &gt; 600 hp (gal)</td>
<td>Equivalent gallons in engines ≤ 600 hp (gal x 1.378)</td>
<td>Total Diesel fuel usage (gal)</td>
</tr>
<tr>
<td>Diesel fuel usage in engines &gt; 600 hp (gal)</td>
<td>Equivalent gallons in engines ≤ 600 hp (gal x 1.378)</td>
<td>NOx emissions (tons)</td>
</tr>
<tr>
<td>Diesel fuel usage in engines &gt; 600 hp (gal)</td>
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</tr>
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</tr>
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<td>Equivalent gallons in engines ≤ 600 hp (gal x 1.378)</td>
<td>NOx emissions (tons)</td>
</tr>
</tbody>
</table>

- □ No deviation occurred in this semi-annual period.
- □ Deviation/s occurred in this semi-annual period.  
  Deviation has been reported on: ____________________________

Submitted by: ____________________________  
Title / Position: ____________________________  
Signature: ____________________________  
Date: ____________________________  
Phone: ____________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
Compliance and Enforcement Branch  

Part 70 ESP Semi-Annual Report

Source Name: Allison Transmission, Inc. - Speedway Main Campus  
Source Address: One Allison Way, Mail Code: M-29, Indianapolis Indiana 46222  
Part 70 Permit No.: T097-41322-00310  
Facility (Condition): Emission Unit PTS14 (Test Stand O-2) (Condition D.4.2(a) and (b))  
Parameter: Diesel fuel usage; limit the potential to emit NOx in Test Stands O-2 to less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Limit: The input of diesel fuel to reciprocating engines utilized in Test Stands O-2 shall be less than 182,481 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. For the purposes of determining compliance, gallon of diesel fuel burned in reciprocating engines that are equal to or less than 600 horsepower shall be equivalent to one and thirty seven hundredths (1.378) gallons of diesel fuel burned in reciprocating engines that are greater than 600 horsepower.

Quarter: ___________________ Year: ___________________

<table>
<thead>
<tr>
<th>Month</th>
<th>Diesel fuel usage in engines &gt; 600 hp (gal)</th>
<th>Equivalent gallons in engines ≤ 600 hp (gal x 1.378)</th>
<th>Total Diesel fuel usage (gal)</th>
<th>NOx emissions (tons)</th>
<th>Diesel fuel usage in engines &gt; 600 hp (gal)</th>
<th>Equivalent gallons in engines ≤ 600 hp (gal x 1.378)</th>
<th>Total Diesel fuel usage (gal)</th>
<th>NOx emissions (tons)</th>
<th>Diesel fuel usage in engines &gt; 600 hp (gal)</th>
<th>Equivalent gallons in engines ≤ 600 hp (gal x 1.378)</th>
<th>Total Diesel fuel usage (gal)</th>
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</tbody>
</table>

☐ No deviation occurred in this semi-annual period.

☐ Deviation/s occurred in this semi-annual period. 
Deviation has been reported on: ____________________________

Submitted by: ____________________________
Title / Position: ____________________________
Signature: ____________________________
Date: ____________________________
Phone: ____________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
Compliance and Enforcement Branch  

Part 70 ESP Semi-Annual Report

Source Name: Allison Transmission, Inc. - Speedway Main Campus  
Source Address: One Allison Way, Mail Code: M-29, Indianapolis Indiana 46222  
Part 70 Permit No.: T097-41322-00310  
Facility (Condition): Emission Unit PTS14 (Test Stands O-24 and O-25 only) (Condition D.4.2(c) and (d))  
Parameter: Combined diesel fuel usage; limit the combined potential to emit NOx in Test Stands O-24 and O-25 to less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.  

Limit: The combined input of diesel fuel to reciprocating engines utilized in Test Stands O-24 and O-25 shall be less than 182,481 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. For the purposes of determining compliance, each gallon of diesel fuel burned in reciprocating engines that are equal to or less than 600 horsepower shall be equivalent to one and thirty seven hundredths (1.378) gallons of diesel fuel burned in reciprocating engines that are greater than 600 horsepower.

<table>
<thead>
<tr>
<th>Quarter:</th>
<th>Year:</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Month</td>
<td>Previous 11 Months</td>
</tr>
<tr>
<td>Diesel fuel usage in engines &gt; 600 hp (gal)</td>
<td>Equivalent gallons in engines ≤ 600 hp (gal x 1.378)</td>
</tr>
</tbody>
</table>

☐ No deviation occurred in this semi-annual period.

☐ Deviation/s occurred in this semi-annual period. Deviation has been reported on: ____________________________

Submitted by: ____________________________________________________________  
Title / Position: ____________________________________________________________  
Signature: ________________________________________________________________  
Date: ___________________________________________________________________  
Phone: _________________________________________________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance and Enforcement Branch

Part 70 ESP Semi-Annual Report

Source Name: Allison Transmission, Inc. - Speedway Main Campus
Source Address: One Allison Way, Mail Code: M-29, Indianapolis Indiana 46222
Part 70 Permit No.: T097-41322-00310
Facility (Condition): Emission Unit PTS14 (Test Stand O-31) (Condition D.4.2(e) and (f))
Parameter: Diesel fuel usage; limit the potential to emit NOx in Test Stand O-31 to less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Limit: The input of diesel fuel to reciprocating engines utilized in Test Stand O-31 shall be less than 182,481 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. For the purposes of determining compliance, each gallon of diesel fuel burned in reciprocating engines that are equal to or less than 600 horsepower shall be equivalent to one and thirty seven hundredths (1.378) gallons of diesel fuel burned in reciprocating engines that are greater than 600 horsepower.

Quarter: ___________________   Year: ___________________

<table>
<thead>
<tr>
<th>Month</th>
<th>Diesel fuel usage in engines &gt; 600 hp (gal)</th>
<th>Equivalent gallons in engines ≤ 600 hp (gal x 1.378)</th>
<th>Total Diesel fuel usage (gal)</th>
<th>NOx emissions (tons)</th>
<th>Diesel fuel usage in engines &gt; 600 hp (gal)</th>
<th>Equivalent gallons in engines ≤ 600 hp (gal x 1.378)</th>
<th>Total Diesel fuel usage (gal)</th>
<th>NOx emissions (tons)</th>
<th>Diesel fuel usage in engines &gt; 600 hp (gal)</th>
<th>Equivalent gallons in engines ≤ 600 hp (gal x 1.378)</th>
<th>Total Diesel fuel usage (gal)</th>
<th>NOx emissions (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Month</td>
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<td>12 Month Total</td>
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</tr>
</tbody>
</table>

☐ No deviation occurred in this semi-annual period.

☐ Deviation/s occurred in this semi-annual period.
Deviation has been reported on: ________________________________

Submitted by: ____________________________________________________________
Title / Position: ___________________________________________________________
Signature: _______________________________________________________________
Date: ___________________________________________________________________
Phone: __________________________________________________________________


INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance and Enforcement Branch

Part 70 ESP Semi-Annual Report

Source Name: Allison Transmission, Inc. - Speedway Main Campus
Source Address: One Allison Way, Mail Code: M-29, Indianapolis Indiana 46222
Part 70 Permit No.: T097-41322-00310
Facility (Condition): Emission Unit ETC53 (Condition D.5.2)
Parameter: NOx Emissions
Limit: NOx emissions from reciprocating engines utilized in ETC53 shall be less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The following equation shall be used to determine compliance:

\[ \text{NOx} = \left( \frac{\text{FU} \times D \times \text{EF}}{\text{FCR}} \right)_{\text{Engine 1}} + \left( \frac{\text{FU} \times D \times \text{EF}}{\text{FCR}} \right)_{\text{Engine 2}} \times 1 \text{ ton} / 2,000 \text{ lb} \]

Where:
- NOx = NOx emissions (ton/month)
- FU = Fuel Usage (gal/month)
- D = Density of fuel (lb/gal)
- EF = NOx Emission Factor (lb/hp-hr) (For each engine type used, the emission factor shall be the emission limitation from the applicable federal engine emission standards.)
- FCR = Fuel Consumption Rate (lb fuel/hp-hr)

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column 1</td>
<td>Column 2</td>
</tr>
<tr>
<td>NOx Emissions This Month (tons)</td>
<td>NOx Emissions Previous 11 Months (tons)</td>
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</tbody>
</table>

- No deviation occurred in this semi-annual period.
- Deviation/s occurred in this semi-annual period.
  Deviation has been reported on: __________________________

Submitted by: __________________________
Title / Position: __________________________
Signature: __________________________
Date: __________________________
Phone: __________________________

No deviation occurred in this semi-annual period.

No deviation occurred in this semi-annual period.

Deviation has been reported on: __________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
Compliance and Enforcement Branch  

Part 70 ESP Semi-Annual Report

Source Name: Allison Transmission, Inc. - Speedway Main Campus  
Source Address: One Allison Way, Mail Code: M-29, Indianapolis Indiana 46222  
Part 70 Permit No.: T097-41322-00310  
Facility (Condition): Emission Unit ETC702 (Test Cell 702) (Condition D.6.2)  
Parameter: Diesel fuel usage; limit the potential to emit NOx in Test Cell 702 to less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Limit: The input of diesel fuel to reciprocating engines utilized in Test Cell 702 shall be less than 173,516 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. For the purposes of determining compliance, each gallon of diesel fuel burned in reciprocating engines that are equal to or less than 600 horsepower shall be equivalent to one and thirty seven hundredths (1.378) gallons of diesel fuel burned in reciprocating engines that are greater than 600 horsepower.

Quarter:_____________________ Year:__________________

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
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<tr>
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<td>Previous 11 Months</td>
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<tr>
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<td>Equivalent gallons in engines ≤ 600 hp (gal x 1.378)</td>
<td>Total Diesel fuel usage (gal)</td>
<td>NOx emissions (tons)</td>
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</table>

□ No deviation occurred in this semi-annual period.

□ Deviation/s occurred in this semi-annual period.

Deviation has been reported on:___________________________

Submitted by: ____________________________________________________________
Title / Position: ___________________________________________________________
Signature: _______________________________________________________________
Date: ___________________________________________________________________
Phone: _________________________________________________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance and Enforcement Branch

Part 70 ESP Semi-Annual Report

Source Name: Allison Transmission, Inc. - Speedway Main Campus
Source Address: One Allison Way, Mail Code: M-29, Indianapolis Indiana 46222
Part 70 Permit No.: T097-41322-00310
Facility (Condition): Emission Unit ETC55 (Condition D.9.2(a))
Parameter: NOx Emissions
Limit: NOx emissions from diesel fuel fired reciprocating engines utilized in ETC55 shall be less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The following equation shall be used to determine compliance:

\[ \text{NOx} = \left( \frac{\text{FU} \times \text{D} \times \text{EF}}{\text{FCR}} \right)_{\text{Engine 1}} + \left( \frac{\text{FU} \times \text{D} \times \text{EF}}{\text{FCR}} \right)_{\text{Engine 2}} \times 1 \text{ ton} / 2,000 \text{ lb} \]

Where:
- NOx = NOx emissions (ton/month)
- FU = Fuel Usage (gal/month)
- D = Density of fuel (lb/gal)
- EF = NOx Emission Factor (lb/hp-hr) (For each engine type used, the emission factor shall be the emission limitation from the applicable federal engine emission standards.)
- FCR = Fuel Consumption Rate (lb fuel/hp-hr)

<table>
<thead>
<tr>
<th>Quarter:</th>
<th>Year:</th>
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<tbody>
<tr>
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<table>
<thead>
<tr>
<th>Month</th>
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</thead>
<tbody>
<tr>
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</table>

☐ No deviation occurred in this semi-annual period.
☐ Deviation/s occurred in this semi-annual period.

Deviation has been reported on: ________________________

Submitted by: ____________________________________________
Title / Position: __________________________________________
Signature: _______________________________________________
Date: ___________________________________________________
Phone: __________________________________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
Compliance and Enforcement Branch  

Part 70 ESP Semi-Annual Report  

Source Name: Allison Transmission, Inc. - Speedway Main Campus  
Source Address: One Allison Way, Mail Code: M-29, Indianapolis Indiana 46222  
Part 70 Permit No.: T097-41322-00310  
Facility (Condition): Emission Unit ETC55 (Condition D.9.2(b))  
Parameter: CO Emissions  
Limit: CO emissions from diesel fuel fired reciprocating engines utilized in ETC55 shall be less than one-hundred (100) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.  

The following equation shall be used to determine compliance:  

\[
CO = \left( \frac{FU \times D \times EF}{FCR} \right)_{Engine \ 1} + \left( \frac{FU \times D \times EF}{FCR} \right)_{Engine \ 2} \times \frac{1 \text{ ton}}{2,000 \text{ lb}}
\]

Where:  
- \( CO \) = CO emissions (ton/month)  
- \( FU \) = Fuel Usage (gal/month)  
- \( D \) = Density of fuel (lb/gal)  
- \( EF \) = CO Emission Factor (lb/hp-hr) (For each engine type used, the emission factor shall be the emission limitation from the applicable federal engine emission standards.)  
- \( FCR \) = Fuel Consumption Rate (lb fuel/hp-hr)  

Quarter: _________________  
Year: _________________  

<table>
<thead>
<tr>
<th>Month</th>
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</table>

☐ No deviation occurred in this semi-annual period.  
☐ Deviation/s occurred in this semi-annual period.  
Deviation has been reported on: ________________________________  

Submitted by: ____________________________________________  
Title / Position: _________________________________________  
Signature: ______________________________________________  
Date: ___________________________________________________  
Phone: ___________________________________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
Compliance and Enforcement Branch  

Part 70 ESP Semi-Annual Report  

Source Name: Allison Transmission, Inc. - Speedway Main Campus  
Source Address: One Allison Way, Mail Code: M-29, Indianapolis Indiana 46222  
Part 70 Permit No.: T097-41322-00310  
Facility (Condition): Emission Unit ETC55 (Condition D.9.3)  
Parameter: SO2 Emissions  
Limit: SO2 emissions from diesel fuel fired reciprocating engines utilized in ETC55 shall be less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.  

The following equation shall be used to determine compliance:  

\[ SO_2 = \left( \frac{FU \times D \times EF}{FCR} \right)_{\text{Engine 1}} + \left( \frac{FU \times D \times EF}{FCR} \right)_{\text{Engine 2}} \times 1 \text{ ton} / 2,000 \text{ lb} \]  

Where:  
SO2 = SO2 emissions (ton/month)  
FU = Fuel Usage (gal/month)  
D = Density of fuel (lb/gal)  
EF = SO2 Emission Factor (0.00405 lb SO2/hp-hr) (from AP-42, Table 3.4-1)  
FCR = Fuel Consumption Rate (lb fuel/hp-hr)  

Quarter: _______________________ Year: ____________________  

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
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</thead>
<tbody>
<tr>
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<td>SO2 Emissions This Month (tons)</td>
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<td>SO2 Emissions 12 Month Total (tons)</td>
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</tbody>
</table>

☐ No deviation occurred in this semi-annual period.  
☐ Deviation/s occurred in this semi-annual period.  
Deviation has been reported on: ________________________________  
Submitted by: ________________________________________________  
Title / Position: ________________________________________________  
Signature: _______________________________________________________  
Date: ____________________________________________________________  
Phone: ___________________________________________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 ESP Semi-Annual Report

Source Name: Allison Transmission, Inc. - Speedway Main Campus
Source Address: One Allison Way, Indianapolis, Indiana
Part 70 Permit No.: T097-41349-00310
Facility (Condition): Test Cells 45, 48N, 48S, and 51 (Condition D.2.4(a))
Parameter: equivalent diesel usage

Limits:

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<th>Pollutant</th>
<th>gallons per twelve consecutive month period</th>
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<tbody>
<tr>
<td>NOx</td>
<td>1,378,691</td>
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<tr>
<td>VOC</td>
<td>9,888,979</td>
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<tr>
<td>CO</td>
<td>37,536,648</td>
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<tr>
<td>SO2</td>
<td>1,991,596</td>
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Quarter: ___________________ Year: ___________________

<table>
<thead>
<tr>
<th>Month</th>
<th>Pollutant</th>
<th>Column 1</th>
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<tbody>
<tr>
<td></td>
<td>NOx</td>
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<td>SO2</td>
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</tbody>
</table>

☐ No deviation occurred in this semi-annual period.

☐ Deviation/s occurred in this semi-annual period.
   Deviation has been reported on: ____________________________

Submitted by: ____________________________________________
Title / Position: _________________________________________
Signature: ______________________________________________
Date: ___________________________________________________
Phone: ___________________________________________________
### Part 70 ESP Semi-Annual Report

**Source Name:** Allison Transmission, Inc. - Speedway Main Campus  
**Source Address:** One Allison Way, Indianapolis, Indiana  
**Part 70 Permit No.:** T097-41349-00310  
**Facility (Condition):** Test Cells 45, 48N, 48S, and 51 (Condition D.2.4(a))  
**Parameter:** equivalent diesel usage  
**Limits:**

<table>
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<tr>
<th>Pollutant</th>
<th>gallons per twelve consecutive month period</th>
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</thead>
<tbody>
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<td>PM</td>
<td>74,263,780</td>
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<tr>
<td>PM10</td>
<td>46,215,352</td>
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<tr>
<td>PM2.5</td>
<td>32,225,819</td>
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</tbody>
</table>

**Quarter:** ___________________  
**Year:** ___________________

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
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<td>PM2.5</td>
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</table>

- No deviation occurred in this semi-annual period.  
- Deviation/s occurred in this semi-annual period.  
  Deviation has been reported on: _________________________

Submitted by: ____________________________________________________________  
**Title / Position:** _______________________________________________________  
**Signature:** ____________________________________________________________  
**Date:** __________________________________________________________________

Phone: ____________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  

Part 70 ESP Semi-Annual Report

Source Name: Allison Transmission, Inc. - Speedway Main Campus  
Source Address: One Allison Way, Indianapolis, Indiana  
Part 70 Permit No.: T097-41349-00310  
Facility (Condition): Test Cells 45, 48N, 48S, 50N, 52N, 50S and 52S (Condition D.2.6)  
Parameter: total Gasoline usage  
Limit: 497.8 kilo gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

Quarter:__________ Year:______________

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
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<tr>
<td></td>
<td>total Gasoline usage This Month (gallon)</td>
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<td>total Gasoline usage 12 Month Total (gallon)</td>
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</tbody>
</table>

☐ No deviation occurred in this semi-annual period.

☐ Deviation/s occurred in this semi-annual period.

Deviation has been reported on:___________________________

Submitted by: __________________________________________________________

Title / Position: __________________________________________________________  
Signature: _______________________________________________________________  
Date: ___________________________________________________________________  
Phone: _________________________________________________________________
### Part 70 ESP Semi-Annual Report

Source Name: Allison Transmission, Inc. - Speedway Main Campus  
Source Address: One Allison Way, Indianapolis, Indiana  
Part 70 Permit No.: T097-41349-00310  
Facility (Condition): Test Cells 45, 48N, 48S (Condition D.2.5)  
Parameter: VOC emissions  
Limits: 24.9 tons per twelve (12) consecutive month period with compliance determined at the end of each month for each test cell

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Year</th>
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<tbody>
<tr>
<td></td>
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<table>
<thead>
<tr>
<th>Month</th>
<th>Test Cell</th>
<th>Column 1</th>
<th>Column 2</th>
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</thead>
<tbody>
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<td></td>
<td></td>
<td>VOC Emissions This Month (tons)</td>
<td>VOC Emissions Previous 11 Months (tons)</td>
<td>VOC Emissions 12 Month Total (tons)</td>
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- No deviation occurred in this semi-annual period.
- Deviation/s occurred in this semi-annual period. Deviation has been reported on: ____________________________

Submitted by: ____________________________________________________________  
Title / Position: ___________________________________________________________  
Signature: _________________________________________________________________  
Date: ___________________________________________________________________  
Phone: __________________________________________________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  

Part 70 ESP Semi-Annual Report

Source Name: Allison Transmission, Inc. - Speedway Main Campus  
Source Address: One Allison Way, Indianapolis, Indiana  
Part 70 Permit No.: T097-41349-00310  
Facility (Condition): Test Cells 50N, 52N, 50S, 52S (Condition D.2.5)  
Parameter: VOC emissions  
Limits: 24.9 tons per twelve (12) consecutive month period with compliance determined at the end of each month for each test cell

<table>
<thead>
<tr>
<th>Month</th>
<th>Test Cell</th>
<th>Column 1</th>
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<tbody>
<tr>
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- No deviation occurred in this semi-annual period.  
- Deviation/s occurred in this semi-annual period.  
  Deviation has been reported on: ________________________________

Submitted by: ________________________________________________  
Title / Position: ______________________________________________  
Signature: ___________________________________________________  
Date: __________________________________________________________________  
Phone: __________________________________________________________________

☐ No deviation occurred in this semi-annual period.  
☐ Deviation/s occurred in this semi-annual period.  
  Deviation has been reported on: ________________________________

Submitted by: ________________________________________________  
Title / Position: ______________________________________________  
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Date: __________________________________________________________________  
Phone: __________________________________________________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Allison Transmission, Inc.
Source Address: One Allison Way, Indianapolis, Indiana 46222
Part 70 Permit No.: T097-41349-00310

Months: __________ to __________ Year: ___________

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B – Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C - General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

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| Probable Cause of Deviation: |

| Response Steps Taken: |

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Form Completed by: _______________________________________________________

Title / Position: _________________________________________________________

Date: ___________________________________________________________________

Phone: _________________________________________________________________
Attachment A

Part 70 Operating Permit No: T097-41349-00310

[Downloaded from the eCFR on May 13, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Source: 72 FR 32759, June 13, 2007, unless otherwise noted.

§ 60.40c  Applicability and delegation of authority.

(a) Except as provided in paragraphs (d), (e), (f), and (g) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, § 60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO2) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§ 60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in § 60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under § 60.14.

(e) Affected facilities (i.e. heat recovery steam generators and fuel heaters) that are associated with stationary combustion turbines and meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators, fuel heaters, and other affected facilities that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/h) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/h) heat input of fossil fuel. If the heat recovery steam generator, fuel heater, or other affected facility is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The stationary combustion turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(f) Any affected facility that meets the applicability requirements of and is subject to subpart AAAA or subpart CCCC of this part is not subject to this subpart.

(g) Any facility that meets the applicability requirements and is subject to an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBBB of this part is not subject to this subpart.

(h) Affected facilities that also meet the applicability requirements under subpart J or subpart Ja of this part are subject to the PM and NOX standards under this subpart and the SO2 standards under subpart J or subpart Ja of this part, as applicable.

(i) Temporary boilers are not subject to this subpart.
§ 60.41c Definitions.

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

**Annual capacity factor** means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

**Coal** means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see § 60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal not meeting the definition of natural gas, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

**Coal refuse** means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb)) on a dry basis.

**Combined cycle system** means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

**Combustion research** means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (i.e., the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

**Conventional technology** means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

**Distillate oil** means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see § 60.17), diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see § 60.17), kerosine, as defined by the American Society of Testing and Materials in ASTM D3699 (incorporated by reference, see § 60.17), biodiesel as defined by the American Society of Testing and Materials in ASTM D6751 (incorporated by reference, see § 60.17), or biodiesel blends as defined by the American Society of Testing and Materials in ASTM D7467 (incorporated by reference, see § 60.17).

**Dry flue gas desulfurization technology** means a SO₂ control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

**Duct burner** means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.
Emerging technology means any SO\textsubscript{2} control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under §\,60.48c(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

Fluidized bed combustion technology means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

Heat transfer medium means any material that is used to transfer heat from one point to another point.

Maximum design heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §\,60.17); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

Potential sulfur dioxide emission rate means the theoretical SO\textsubscript{2} emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §\,60.17).
Steam generating unit means a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Temporary boiler means a steam generating unit that combusts natural gas or distillate oil with a potential SO₂ emissions rate no greater than 26 ng/J (0.060 lb/MMBtu), and the unit is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A steam generating unit is not a temporary boiler if any one of the following conditions exists:

1. The equipment is attached to a foundation.
2. The steam generating unit or a replacement remains at a location for more than 180 consecutive days. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.
3. The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.
4. The equipment is moved from one location to another in an attempt to circumvent the residence time requirements of this definition.

Wet flue gas desulfurization technology means an SO₂ control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO₂.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sander dust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.


§ 60.42c Standard for sulfur dioxide (SO₂).

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the performance test is completed or required to be completed under § 60.8, whichever date comes first, the owner or operator of an affected facility that combusts only coal shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO₂ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO₂ emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO₂ in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO₂ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO₂ emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO₂ in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.

(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the performance test is completed or required to be completed under § 60.8, whichever date comes first, the owner or operator of an affected facility that:
(1) Combusts only coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential SO2 emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO2 in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is fired with coal refuse, the affected facility subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 87 ng/J (0.20 lb/MMBtu) heat input SO2 emissions limit or the 90 percent SO2 reduction requirement specified in paragraph (a) of this section and the emission limit is determined pursuant to paragraph (e)(2) of this section.

(2) Combusts only coal and that uses an emerging technology for the control of SO2 emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO2 in excess of 50 percent (0.50) of the potential SO2 emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO2 in excess of 260 ng/J (0.60 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent SO2 reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO2 in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under paragraphs (c)(1), (2), (3), or (4).

(1) Affected facilities that have a heat input capacity of 22 MW (75 MMBtu/h) or less;

(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.

(3) Affected facilities located in a noncontinental area; or

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from exhaust gases entering the duct burner.

(d) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal or oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO2 in excess of 215 ng/J (0.50 lb/MMBtu) heat input from oil; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(e) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO2 in excess of the following:

(1) The percent of potential SO2 emission rate or numerical SO2 emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that

(i) Combusts coal in combination with any other fuel;
(ii) Has a heat input capacity greater than 22 MW (75 MMBtu/h); and

(iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s = \frac{(K_a H_a + K_b H_b + K_c H_c)}{H_a + H_b + H_c}$$

Where:

- $E_s$ = SO$_2$ emission limit, expressed in ng/J or lb/MMBtu heat input;
- $K_a = 520$ ng/J (1.2 lb/MMBtu);
- $K_b = 260$ ng/J (0.60 lb/MMBtu);
- $K_c = 215$ ng/J (0.50 lb/MMBtu);
- $H_a$ = Heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [MMBtu];
- $H_b$ = Heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (MMBtu); and
- $H_c$ = Heat input from the combustion of oil, in J (MMBtu).

(f) Reduction in the potential SO$_2$ emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

(1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential SO$_2$ emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion SO$_2$ control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), (3), or (4) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under § 60.48c(f), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).

(2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(3) Coal-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).

(4) Other fuels-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).

(i) The SO$_2$ emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.
(j) For affected facilities located in noncontinental areas and affected facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.


§ 60.43c Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

1. 22 ng/J (0.051 lb/MMBtu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

2. 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

1. 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

2. 130 ng/J (0.30 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph (c).

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

(e)(1) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) of this section.

(2) As an alternative to meeting the requirements of paragraph (e)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences modification...
after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) An owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under § 60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO₂ emissions is not subject to the PM limit in this section.


§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.

(a) Except as provided in paragraphs (g) and (h) of this section and § 60.8(b), performance tests required under § 60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in § 60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under § 60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO₂ emission limits under § 60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affect facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) of this section and § 60.8, compliance with the percent reduction requirements and SO₂ emission limits under § 60.42c is based on the average percent reduction and the average SO₂ emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and SO₂ emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 of appendix A of this part are used to determine the hourly SO₂ emission rate (Eho ) and the 30-day average SO₂ emission rate (Eao ). The hourly averages used to compute the 30-day averages are obtained from the CEMS. Method 19 of appendix A of this part shall be used to calculate Eao when using daily fuel sampling or Method 6B of appendix A of this part.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted Eao (Eao o) is used in Equation 19-19 of Method 19 of appendix A of this part to compute the adjusted Eao (Eao o). The Eao o is computed using the following formula:

\[ E_{ao} = \frac{E_{ao} - E_{w} (1 - X_{3})}{X_{3}} \]
Where:

\[ E_{ho\ o} = \text{Adjusted } E_{ho}, \ \text{ng/J (lb/MMBtu)}; \]
\[ E_{ho} = \text{Hourly SO}_2 \text{ emission rate, ng/J (lb/MMBtu)}; \]
\[ E_w = \text{SO}_2 \text{ concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value } E_w \text{ for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure } E_w \text{ if the owner or operator elects to assume } E_w = 0. \]
\[ X_k = \text{Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.} \]

(2) The owner or operator of an affected facility that qualifies under the provisions of § 60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters \( E_w \) or \( X_k \) if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under § 60.42c(a) or (b) shall determine compliance with the SO\(_2\) emission limits under § 60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential SO\(_2\) emission rate is computed using the following formula:

\[
\% P_s = 100 \left( 1 - \frac{\% R_g}{100} \right) \left( 1 - \frac{\% R_f}{100} \right)
\]

Where:

\( \% P_s = \text{Potential SO}_2 \text{ emission rate, in percent;} \)
\( \% R_g = \text{SO}_2 \text{ removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and} \)
\( \% R_f = \text{SO}_2 \text{ removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.} \)

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the \( \% P_s \), an adjusted \( \% R_g \) (\( \% R_g\ o \)) is computed from \( E_{ao\ o} \) from paragraph (e)(1) of this section and an adjusted average SO\(_2\) inlet rate (\( E_{ai\ o} \)) using the following formula:

\[
\% R_g\ o = 100 \left( 1 - \frac{E_{ao\ o}}{E_{ai\ o}} \right)
\]

Where:

\( \% R_g = \text{Adjusted } \% R_g, \ \text{in percent;} \)
\( E_{ao\ o} = \text{Adjusted } E_{ao}, \ \text{ng/J (lb/MMBtu)}; \) and
\( E_{ai\ o} = \text{Adjusted average SO}_2 \text{ inlet rate, ng/J (lb/MMBtu).} \)
(ii) To compute $E_{\text{h)o}}$, an adjusted hourly SO₂ inlet rate ($E_{\text{h)i}}$) is used. The $E_{\text{h)i}}$ is computed using the following formula:

$$E_{\text{h)o}} = \frac{E_{\text{h)i}} - E_{\text{w}}(1 - X_k)}{X_k}$$

Where:

$E_{\text{h)i}} = \text{Adjusted } E_{\text{h)i}}, \text{ ng/J (lb/MMBtu)}$;

$E_{\text{h)i}} = \text{Hourly SO₂ inlet rate, ng/J (lb/MMBtu)}$;

$E_{\text{w}} = \text{SO₂ concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu)}$. The value $E_{\text{w}}$ for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure $E_{\text{w}}$ if the owner or operator elects to assume $E_{\text{w}} = 0$; and

$X_k = \text{Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.}$

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under § 60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under § 60.46c(d)(2).

(h) For affected facilities subject to § 60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in § 60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO₂ standards under § 60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO₂ emissions data in calculating $%P_s$ and $E_{\text{h)o}}$ under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under § 60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $%P_s$ or $E_{\text{h)o}}$ pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

§ 60.45c Compliance and performance test methods and procedures for particulate matter.

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under § 60.43c shall conduct an initial performance test as required under § 60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of this section.

(1) Method 1 of appendix A of this part shall be used to select the sampling site and the number of traverse sampling points.
(2) Method 3A or 3B of appendix A-2 of this part shall be used for gas analysis when applying Method 5 or 5B of appendix A-3 of this part or 17 of appendix A-6 of this part.

(3) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 of appendix A of this part may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 8.1 and 11.1 of Method 5B of appendix A of this part may be used in Method 17 of appendix A of this part only if Method 17 of appendix A of this part is used in conjunction with a wet scrubber system. Method 17 of appendix A of this part shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(5) For Method 5 or 5B of appendix A of this part, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 ±14 °C (320±25 °F).

(6) For determination of PM emissions, an oxygen (O₂) or carbon dioxide (CO₂) measurement shall be obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(7) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rates expressed in ng/J (lb/MMBtu) heat input shall be determined using:

(i) The O₂ or CO₂ measurements and PM measurements obtained under this section, (ii) The dry basis F factor, and (iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(8) Method 9 of appendix A-4 of this part shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under § 60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(c) In place of PM testing with Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(14) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.
(3) The monitor shall be installed, evaluated, and operated in accordance with § 60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under § 60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under § 60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraph (c)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (c)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under § 60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (c)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O2 (or CO2 ) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.

(i) For PM, Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall be used; and

(ii) For O2 (or CO2 ), Method 3A or 3B of appendix A-2 of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.

(14) As of January 1, 2012, and within 90 days after the date of completing each performance test, as defined in § 60.8, conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit (i.e., reference method) data and performance test (i.e., compliance test) data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see http://www.epa.gov/ttn/chief/ert/ert tool.html/) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.
(d) The owner or operator of an affected facility seeking to demonstrate compliance under § 60.43c(e)(4) shall follow the applicable procedures under § 60.48c(f). For residual oil-fired affected facilities, fuel supplier certifications are only allowed for facilities with heat input capacities between 2.9 and 8.7 MW (10 to 30 MMBtu/h).


§ 60.46c Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the SO₂ emission limits under § 60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO₂ concentrations and either O₂ or CO₂ concentrations at the outlet of the SO₂ control device (or the outlet of the steam generating unit if no SO₂ control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under § 60.42c shall measure SO₂ concentrations and either O₂ or CO₂ concentrations at both the inlet and outlet of the SO₂ control device.

(b) The 1-hour average SO₂ emission rates measured by a CEMS shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under § 60.42c. Each 1-hour average SO₂ emission rate must be based on at least 30 minutes of operation, and shall be calculated using the data points required under § 60.13(h)(2). Hourly SO₂ emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under § 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities subject to the percent reduction requirements under § 60.42c, the span value of the SO₂ CEMS at the inlet to the SO₂ control device shall be 125 percent of the maximum estimated hourly potential SO₂ emission rate of the fuel combusted, and the span value of the SO₂ CEMS at the outlet from the SO₂ control device shall be 50 percent of the maximum estimated hourly potential SO₂ emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of § 60.42c, the span value of the SO₂ CEMS at the outlet from the SO₂ control device (or outlet of the steam generating unit if no SO₂ control device is used) shall be 125 percent of the maximum estimated hourly potential SO₂ emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO₂ control device (or outlet of the steam generating unit if no SO₂ control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO₂ emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO₂ control device (or outlet of the steam generating unit if no SO₂ control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO₂ emission rate by using Method 6B of appendix A of this part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according the Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO₂ input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when
calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B of appendix A of this part may be used in lieu of CEMS to measure SO\(_2\) at the inlet or outlet of the SO\(_2\) control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable SO\(_2\) and CO\(_2\) measurement train operated at the candidate location and a second similar train operated according to the procedures in § 3.2 and the applicable procedures in section 7 of Performance Specification 2 of appendix B of this part. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to § 60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO\(_2\) standards based on fuel supplier certification, as described under § 60.48c(f), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

§ 60.47c Emission monitoring for particulate matter.

(a) Except as provided in paragraphs (c), (d), (e), and (f) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under § 60.43c shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard in § 60.43c(c) that is not required to use a COMS due to paragraphs (c), (d), (e), or (f) of this section that elects not to use a COMS shall conduct a performance test using Method 9 of appendix A-4 of this part and the procedures in § 60.11 to demonstrate compliance with the applicable limit in § 60.43c by April 29, 2011, within 45 days of stopping use of an existing COMS, or within 180 days after initial startup of the facility, whichever is later, and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. The observation period for Method 9 of appendix A-4 of this part performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.

(1) Except as provided in paragraph (a)(2) and (a)(3) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A-4 of this part performance tests using the procedures in paragraph (a) of this section according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, as determined by the most recent Method 9 of appendix A-4 of this part performance test results.

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 3 calendar months from
the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.

(2) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 of this part performance tests, elect to perform subsequent monitoring using Method 22 of appendix A-7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A-7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (i.e., 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (i.e., 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (i.e., 90 seconds) or conduct a new Method 9 of appendix A-4 of this part performance test using the procedures in paragraph (a) of this section within 45 calendar days according to the requirements in § 60.45c(a)(8).

(ii) If no visible emissions are observed for 10 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS “Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems.” This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

(b) All COMS shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Owners and operators of an affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.060 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO2 or PM emissions and that are subject to an opacity standard in § 60.43c(c) are not required to operate a COMS if they follow the applicable procedures in § 60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS must calibrate, maintain, operate, and record the output of the system for PM emissions discharged to the atmosphere as specified in § 60.45c(c). The CEMS specified in paragraph § 60.45c(c) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(e) Owners and operators of an affected facility that is subject to an opacity standard in § 60.43c(c) and that does not use post-combustion technology (except a wet scrubber) for reducing PM, SO2, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur, and is operated such that emissions of CO discharged to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS. Owners and
operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the
procedures specified in paragraphs (e)(1) through (4) of this section; or

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in § 60.58b(j)(3) of subpart Eb of this part.

(ii) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(iii) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in § 60.13(h)(2).

(iv) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(2) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(3) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(4) You must record the CO measurements and calculations performed according to paragraph (e) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(f) An owner or operator of an affected facility that is subject to an opacity standard in § 60.43c(c) is not required to operate a COMS provided that the affected facility meets the conditions in either paragraphs (f)(1), (2), or (3) of this section.

(1) The affected facility uses a fabric filter (baghouse) as the primary PM control device and, the owner or operator operates a bag leak detection system to monitor the performance of the fabric filter according to the requirements in section § 60.48Da of this part.

(2) The affected facility uses an ESP as the primary PM control device, and the owner or operator uses an ESP predictive model to monitor the performance of the ESP developed in accordance and operated according to the requirements in section § 60.48Da of this part.

(3) The affected facility burns only gaseous fuels and/or fuel oils that contain no greater than 0.5 weight percent sulfur, and the owner or operator operates the unit according to a written site-specific monitoring plan approved by the permitting authority. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard. For testing performed as part of this site-specific monitoring plan, the permitting authority may require as an alternative to the notification and reporting requirements specified in §§ 60.8 and 60.11 that the owner or operator submit any deviations with the excess emissions report required under § 60.48c(c).
§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by § 60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under § 60.42c, or § 60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO₂ emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of § 60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO₂ emission limits of § 60.42c, or the PM or opacity limits of § 60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) In addition to the applicable requirements in § 60.7, the owner or operator of an affected facility subject to the opacity limits in § 60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in paragraphs (c)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(2)(i) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.
(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator.

(d) The owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.42c shall submit reports to the Administrator.

(e) The owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO₂ emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO₂ emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO₂ or diluent (O₂ or CO₂) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in § 60.41c; and

(iii) The sulfur content or maximum sulfur content of the oil.
(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate or maximum potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in § 60.48c(f) to demonstrate compliance with the SO2 standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in § 60.42C to use fuel certification to demonstrate compliance with the SO2 standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

(h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under § 60.42c or § 60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.
(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]
What This Subpart Covers

§60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in paragraphs (a)(1) through (4) 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 CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

   (i) 2007 or later, for engines that are not fire pump engines;

   (ii) The model year listed in Table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are:

   (i) Manufactured after April 1, 2006, and are not fire pump engines, or

   (ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.

(4) The provisions of §60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE 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 applicable to area sources.

(d) Stationary CI 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 part 89, subpart J and 40 CFR part 94, subpart J, 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.

(e) Owners and operators of facilities with CI ICE 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.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

**Emission Standards for Manufacturers**

§60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(3) Their 2013 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(e) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards and other requirements for new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.110, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and
(2) Their 2014 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(f) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary non-emergency CI ICE identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 1 to 40 CFR 1042.1 identifies 40 CFR part 1042 as being applicable, 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Remote areas of Alaska; and

(2) Marine offshore installations.

(g) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power, and displacement of the reconstructed stationary CI ICE.

(h) Stationary CI ICE certified to the standards in 40 CFR part 1039 and equipped with auxiliary emission control devices (AECDs) as specified in 40 CFR 1039.665 must meet the Tier 1 certification emission standards for new nonroad CI engines in 40 CFR 89.112 while the AECD is activated during a qualified emergency situation. A qualified emergency situation is defined in 40 CFR 1039.665. When the qualified emergency situation has ended and the AECD is deactivated, the engine must resume meeting the otherwise applicable emission standard specified in this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011; 81 FR 44219, July 7, 2016]

§60.4202   What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants for model year 2007 engines, and


(2) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the certification emission standards for new nonroad CI engines for engines of the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants.
(c) [Reserved]

(d) Beginning with the model years in table 3 to this subpart, stationary Cl internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

(e) Stationary Cl internal combustion engine manufacturers must certify the following emergency stationary Cl ICE that are not fire pump engines to the certification emission standards for new marine Cl engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

1. Their 2007 model year through 2012 emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

2. Their 2013 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder;

3. Their 2013 model year emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder; and

4. Their 2014 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(f) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE to the certification emission standards and other requirements applicable to Tier 3 new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, for all pollutants, for the same displacement and maximum engine power:

1. Their 2013 model year and later emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

2. Their 2014 model year and later emergency stationary CI ICE with a maximum engine power less than 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(g) Notwithstanding the requirements in paragraphs (a) through (d) of this section, stationary emergency Cl internal combustion engines identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 2 to 40 CFR 1042.101 identifies Tier 3 standards as being applicable, the requirements applicable to Tier 3 engines in 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

1. Remote areas of Alaska; and


(h) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary Cl internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (f) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed emergency stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011; 81 FR 44219, July 7, 2016]
§60.4203 How long must my engines meet the emission standards if I am a manufacturer of stationary CI internal combustion engines?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§60.4201 and 60.4202 during the certified emissions life of the engines.

[76 FR 37968, June 28, 2011]

Emission Standards for Owners and Operators

§60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the following requirements:

(1) For engines installed prior to January 1, 2012, limit the emissions of NOx in the stationary CI internal combustion engine exhaust to the following:

   (i) 17.0 grams per kilowatt-hour (g/KW-hr) (12.7 grams per horsepower-hour (g/HP-hr)) when maximum engine speed is less than 130 revolutions per minute (rpm);

   (ii) $45 \cdot n^{-0.2} g/KW-hr (34 \cdot n^{-0.2} g/HP-hr)$ when maximum engine speed is 130 or more but less than 2,000 rpm, where $n$ is maximum engine speed; and

   (iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012 and before January 1, 2016, limit the emissions of NOx in the stationary CI internal combustion engine exhaust to the following:

   (i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

   (ii) $44 \cdot n^{-0.23} g/KW-hr (33 \cdot n^{-0.23} g/HP-hr)$ when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where $n$ is maximum engine speed; and

   (iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) For engines installed on or after January 1, 2016, limit the emissions of NOx in the stationary CI internal combustion engine exhaust to the following:

   (i) 3.4 g/KW-hr (2.5 g/HP-hr) when maximum engine speed is less than 130 rpm;

   (ii) $9.0 \cdot n^{-0.20} g/KW-hr (6.7 \cdot n^{-0.20} g/HP-hr)$ where $n$ (maximum engine speed) is 130 or more but less than 2,000 rpm; and

   (iii) 2.0 g/KW-hr (1.5 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.
(4) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

(d) Owners and operators of non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the not-to-exceed (NTE) standards as indicated in §60.4212.

(e) Owners and operators of any modified or reconstructed non-emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed non-emergency stationary CI ICE that are specified in paragraphs (a) through (d) of this section.

(f) Owners and operators of stationary CI ICE certified to the standards in 40 CFR part 1039 and equipped with AECDs as specified in 40 FR 1039.665 must meet the Tier 1 certification emission standards for new nonroad CI engines in 40 CFR 89.112 while the AECD is activated during a qualified emergency situation. A qualified emergency situation is defined in 40 CFR 1039.665. When the qualified emergency situation has ended and the AECD is deactivated, the engine must resume meeting the otherwise applicable emission standard specified in this section.

§60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in Table 1 to this subpart. Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in Table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in this section.

(1) For engines installed prior to January 1, 2012, limit the emissions of NO\(_x\) in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) \(45 \cdot n^{-0.2}\) g/KW-hr (34 \(\cdot n^{-0.2}\) g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where \(n\) is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO\(_x\) in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) \(44 \cdot n^{-0.23}\) g/KW-hr (33 \(\cdot n^{-0.23}\) g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where \(n\) is maximum engine speed; and
(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

(e) Owners and operators of emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the NTE standards as indicated in §60.4212.

(f) Owners and operators of any modified or reconstructed emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed CI ICE that are specified in paragraphs (a) through (e) of this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 over the entire life of the engine.

[76 FR 37969, June 28, 2011]

Fuel Requirements for Owners and Operators

§60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

(c) [Reserved]

(d) Beginning June 1, 2012, owners and operators of stationary CI ICE subject to this subpart with a displacement of greater than or equal to 30 liters per cylinder are no longer subject to the requirements of paragraph (a) of this section, and must use fuel that meets a maximum per-gallon sulfur content of 1,000 parts per million (ppm).

(e) Stationary CI ICE that have a national security exemption under §60.4200(d) are also exempt from the fuel requirements in this section.


Other Requirements for Owners and Operators

§60.4208 What is the deadline for importing or installing stationary CI ICE produced in previous model years?

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.
(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) After December 31, 2018, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power greater than or equal to 600 KW (804 HP) and less than 2,000 KW (2,680 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that do not meet the applicable requirements for 2017 model year non-emergency engines.

(h) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (g) of this section after the dates specified in paragraphs (a) through (g) of this section.

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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]
Compliance Requirements

§60.4210  What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of less than 10 liters per cylinder to the emission standards specified in §60.4201(a) through (c) and §60.4202(a), (b) and (d) using the certification procedures required in 40 CFR part 89, subpart B, or 40 CFR part 1039, subpart C, as applicable, and must test their engines as specified in those parts. For the purposes of this subpart, engines certified to the standards in table 1 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89. For the purposes of this subpart, engines certified to the standards in table 4 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89, except that engines with NFPA nameplate power of less than 37 KW (50 HP) certified to model year 2011 or later standards shall be subject to the same requirements as engines certified to the standards in 40 CFR part 1039.

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in §60.4201(d) and (e) and §60.4202(e) and (f) using the certification procedures required in 40 CFR part 94, subpart C, or 40 CFR part 1042, subpart C, as applicable, and must test their engines as specified in 40 CFR part 94 or 1042, as applicable.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 1039.125, 1039.130, and 1039.135, and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 89, 40 CFR part 94 or 40 CFR part 1042 for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

(1) Stationary CI internal combustion engines manufactured from January 1, 2006 to March 31, 2006 (January 1, 2006 to June 30, 2006 for fire pump engines), other than those that are part of certified engine families under the nonroad CI engine regulations, must be labeled according to 40 CFR 1039.20.

(2) Stationary CI internal combustion engines manufactured from April 1, 2006 to December 31, 2006 (or, for fire pump engines, July 1, 2006 to December 31 of the year preceding the year listed in table 3 to this subpart) must be labeled according to paragraphs (c)(2)(i) through (iii) of this section:

(i) Stationary CI internal combustion engines that are part of certified engine families under the nonroad regulations must meet the labeling requirements for nonroad CI engines, but do not have to meet the labeling requirements in 40 CFR 1039.20.

(ii) Stationary CI internal combustion engines that meet Tier 1 requirements (or requirements for fire pumps) under this subpart, but do not meet the requirements applicable to nonroad CI engines must be labeled according to 40 CFR 1039.20. The engine manufacturer may add language to the label clarifying that the engine meets Tier 1 requirements (or requirements for fire pumps) of this subpart.

(iii) Stationary CI internal combustion engines manufactured after April 1, 2006 that do not meet Tier 1 requirements of this subpart, or fire pumps engines manufactured after July 1, 2006 that do not meet the requirements for fire pumps under this subpart, may not be used in the U.S. If any such engines are manufactured in the U.S. after April 1, 2006 (July 1, 2006 for fire pump engines), they must be exported or must be brought into compliance with the appropriate standards prior to initial operation. The export provisions of 40 CFR 1068.230 would apply to engines for export and the manufacturers must label such engines according to 40 CFR 1068.230.

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.
(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate, but the words “stationary” must be included instead of “nonroad” or “marine” on the label. In addition, such engines must be labeled according to 40 CFR 1039.20.

(iii) Stationary CI internal combustion engines 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.

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR parts 89, 94, 1039 or 1042 for that model year may certify any such family that contains both nonroad (including marine) 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.

(e) Manufacturers of engine families discussed in paragraph (d) of this section may meet the labeling requirements referred to in paragraph (c) of this section for stationary CI ICE by either adding a separate label containing the information required in paragraph (c) of this section or by adding the words “and stationary” after the word “nonroad” or “marine,” as appropriate, to the label.

(f) Starting with the model years shown in table 5 to this subpart, stationary CI internal combustion engine manufacturers must add a permanent label stating that the engine is for stationary emergency use only to each new emergency stationary CI internal combustion engine greater than or equal to 19 KW (25 HP) that meets all the emission standards for emergency engines in §60.4202 but does not meet all the emission standards for non-emergency engines in §60.4201. The label must be added according to the labeling requirements specified in 40 CFR 1039.135(b). Engine manufacturers must specify in the owner’s manual that operation of emergency engines is limited to emergency operations and required maintenance and testing.

(g) Manufacturers of fire pump engines may use the test cycle in table 6 to this subpart for testing fire pump engines and may test at the NFPA certified nameplate HP, provided that the engine is labeled as “Fire Pump Applications Only”.

(h) Engine manufacturers, including importers, may introduce into commerce uncertified engines or engines certified to earlier standards that were manufactured before the new or changed standards took effect until inventories are depleted, as long as such engines are part of normal inventory. For example, if the engine manufacturers' normal industry practice is to keep on hand a one-month supply of engines based on its projected sales, and a new tier of standards starts to apply for the 2009 model year, the engine manufacturer may manufacture engines based on the normal inventory requirements late in the 2008 model year, and sell those engines for installation. The engine manufacturer may not circumvent the provisions of §60.4201 or §60.4202 by stockpiling engines that are built before new or changed standards take effect. Stockpiling of such engines beyond normal industry practice is a violation of this subpart.

(i) The replacement engine provisions of 40 CFR 89.1003(b)(7), 40 CFR 94.1103(b)(3), 40 CFR 94.1103(b)(4) and 40 CFR 1068.240 are applicable to stationary CI engines replacing existing equipment that is less than 15 years old.

(j) Stationary CI ICE manufacturers may equip their stationary CI internal combustion engines certified to the emission standards in 40 CFR part 1039 with AEDCs for qualified emergency situations according to the requirements of 40 CFR 1039.665. Manufacturers of stationary CI ICE equipped with AEDCs as allowed by 40 CFR 1039.665 must meet all of the requirements in 40 CFR 1039.665 that apply to manufacturers. Manufacturers must document that the engine complies with the Tier 1 standard in 40 CFR 89.112 when the AEC is activated. Manufacturers must provide any relevant testing, engineering analysis, or other information in sufficient detail to support such statement when applying for certification (including amending an existing certificate) of an engine equipped with an AEDC as allowed by 40 CFR 1039.665.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011; 81 FR 44219, July 7, 2016]
§60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under paragraph (g) of this section:

1. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

2. Change only those emission-related settings that are permitted by the manufacturer; and

3. Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

1. Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. 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.

5. Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in §60.4212, as applicable.

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must purchase an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section.

(d) If you are an owner or operator and must comply with the emission standards specified in §60.4204(c) or §60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

1. Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in §60.4213.

2. Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

   (i) Identification of the specific parameters you propose to monitor continuously;
(ii) A discussion of the relationship between these parameters and NOX and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit NOX and PM emissions;

(iii) 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;

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

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

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in §60.4213.

(e) If you are an owner or operator of a modified or reconstructed stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(e) or §60.4205(f), you must demonstrate compliance according to one of the methods specified in paragraphs (e)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in §60.4204(e) or §60.4205(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in §60.4212 or §60.4213, as appropriate. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

(f) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (f)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraph (f)(3)(i) of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]

(g) If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

(1) If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power 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. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

(2) If you are an owner or operator of a stationary CI 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 to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

(3) If you are an owner or operator of a stationary CI 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 to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent
performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

(h) The requirements for operators and prohibited acts specified in 40 CFR 1039.665 apply to owners or operators of stationary CI ICE equipped with AECDs for qualified emergency situations as allowed by 40 CFR 1039.665.


Testing Requirements for Owners and Operators

§60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (e) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F, for stationary CI ICE with a displacement of less than 10 liters per cylinder, and according to 40 CFR part 1042, subpart F, for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

\[ \text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \quad \text{(Eq. 1)} \]

Where:

\[ \text{STD} = \text{The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable}. \]

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

\[ \text{STD} = \text{The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c)}. \]

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.
(e) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1042 must not exceed the NTE standards for the same model year and maximum engine power as required in 40 CFR 1042.101(c).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

§60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must conduct performance tests according to paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted according to the requirements in §60.8 and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c).

(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 last at least 1 hour.

(d) To determine compliance with the percent reduction requirement, you must follow the requirements as specified in paragraphs (d)(1) through (3) of this section.

(1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

\[
\frac{C_i - C_o}{C_i} \times 100 = R \quad \text{(Eq. 2)}
\]

Where:

- \(C_i\) = concentration of NOX or PM at the control device inlet,
- \(C_o\) = concentration of NOX or PM at the control device outlet, and
- \(R\) = percent reduction of NOX or PM emissions.

(2) You must normalize the NOX or PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O2) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO2) using the procedures described in paragraph (d)(3) of this section.

\[
C_{adj} = C_d \frac{5.9}{20.9 - \% \text{O}_2} \quad \text{(Eq. 3)}
\]

Where:

- \(C_{adj}\) = Calculated NOX or PM concentration adjusted to 15 percent O2.
- \(C_d\) = Measured concentration of NOX or PM, uncorrected.

5.9 = 20.9 percent O2−15 percent O2, the defined O2 correction value, percent.
%O₂ = Measured O₂ concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent O₂ and CO₂ concentration is measured in lieu of O₂ concentration measurement, a CO₂ correction factor is needed. Calculate the CO₂ correction factor as described in paragraphs (d)(3)(i) through (iii) of this section.

(i) Calculate the fuel-specific F₀ value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

\[
F_0 = \frac{0.209 F_d}{F_c} \quad \text{(Eq. 4)}
\]

Where:

\[F_0 = \text{Fuel factor based on the ratio of O}_2 \text{ volume to the ultimate CO}_2 \text{ volume produced by the fuel at zero percent excess air.}\]

0.209 = Fraction of air that is O₂, percent/100.

\[F_d = \text{Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm}^3/\text{J (dscf}/10^6 \text{ Btu).}\]

\[F_c = \text{Ratio of the volume of CO}_2 \text{ produced to the gross calorific value of the fuel from Method 19, dsm}^3/\text{J (dscf}/10^6 \text{ Btu).}\]

(ii) Calculate the CO₂ correction factor for correcting measurement data to 15 percent O₂, as follows:

\[
X_{CO_2} = \frac{5.9}{F_0} \quad \text{(Eq. 5)}
\]

Where:

\[X_{CO_2} = \text{CO}_2 \text{ correction factor, percent.}\]

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

(iii) Calculate the NOₓ and PM gas concentrations adjusted to 15 percent O₂ using CO₂ as follows:

\[
C_{adj} = C_d \frac{X_{CO_2}}{\% CO_2} \quad \text{(Eq. 6)}
\]

Where:

\[C_{adj} = \text{Calculated NO}_x \text{ or PM concentration adjusted to 15 percent O}_2.\]

\[C_d = \text{Measured concentration of NO}_x \text{ or PM, uncorrected.}\]

\[\% CO_2 = \text{Measured CO}_2 \text{ concentration, dry basis, percent.}\]

(e) To determine compliance with the NOₓ mass per unit output emission limitation, convert the concentration of NOₓ in the engine exhaust using Equation 7 of this section:
$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{\text{KW-hour}}$  \hspace{1cm} \text{ (Eq. 7)}$

Where:

$ER =$ Emission rate in grams per KW-hour.

$C_d =$ Measured NO\textsubscript{X} concentration in ppm.

$1.912 \times 10^{-3} =$ Conversion constant for ppm NO\textsubscript{X} to grams per standard cubic meter at 25 degrees Celsius.

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

$T =$ Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

(f) To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

$ER = \frac{C_{adj} \times Q \times T}{\text{KW-hour}}$  \hspace{1cm} \text{ (Eq. 8)}$

Where:

$ER =$ Emission rate in grams per KW-hour.

$C_{adj} =$ Calculated PM concentration in grams per standard cubic meter.

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

$T =$ Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

Notification, Reports, and Records for Owners and Operators

§60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 KW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 KW (175 HP) and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) Submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (a)(1)(i) through (v) of this section.

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

(ii) The address of the affected source;
(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

(2) Keep records of the information in paragraphs (a)(2)(i) through (iv) of this section.

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

(ii) Maintenance conducted on the engine.

(iii) If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

(iv) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

(d) If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in §60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (d)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

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

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §60.4211(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purposes specified in §60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.
(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA’s Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §60.4.

(e) Owners or operators of stationary CI ICE equipped with AECDs pursuant to the requirements of 40 CFR 1039.665 must report the use of AECDs as required by 40 CFR 1039.665(e).


Special Requirements

§60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

(a) Stationary CI ICE with a displacement of less than 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §§60.4202 and 60.4205.

(b) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in §60.4207.

(c) Stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the following emission standards:

(1) For engines installed prior to January 1, 2012, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) \(45 \cdot n^{-0.2} \text{ g/KW-hr} (34 \cdot n^{-0.2} \text{ g/HP-hr})\) when maximum engine speed is 130 or more but less than 2,000 rpm, where \(n\) is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) \(44 \cdot n^{-0.23} \text{ g/KW-hr} (33 \cdot n^{-0.23} \text{ g/HP-hr})\) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where \(n\) is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]
§60.4216 What requirements must I meet for engines used in Alaska?

(a) Prior to December 1, 2010, owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder located in areas of Alaska not accessible by the FAHS should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

(b) Except as indicated in paragraph (c) of this section, manufacturers, owners and operators of stationary CI ICE with a displacement of less than 10 liters per cylinder located in remote areas of Alaska may meet the requirements of this subpart by manufacturing and installing engines meeting the requirements of 40 CFR parts 94 or 1042, as appropriate, rather than the otherwise applicable requirements of 40 CFR parts 89 and 1039, as indicated in §§60.4201(f) and 60.4202(g).

(c) Manufacturers, owners and operators of stationary CI ICE that are located in remote areas of Alaska may choose to meet the applicable emission standards for emergency engines in §§60.4202 and 60.4205, and not those for non-emergency engines in §§60.4201 and 60.4204, except that for 2014 model year and later non-emergency CI ICE, the owner or operator of any such engine that was not certified as meeting Tier 4 PM standards, must meet the applicable requirements for PM in §§60.4201 and 60.4204 or install a PM emission control device that achieves PM emission reductions of 85 percent, or 60 percent for engines with a displacement of greater than or equal to 30 liters per cylinder, compared to engine-out emissions.

(d) The provisions of §60.4207 do not apply to owners and operators of pre-2014 model year stationary CI ICE subject to this subpart that are located in remote areas of Alaska.

(e) The provisions of §60.4208(a) do not apply to owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS until after December 31, 2009.

(f) The provisions of this section and §60.4207 do not prevent owners and operators of stationary CI ICE subject to this subpart that are located in remote areas of Alaska from using fuels mixed with used lubricating oil, in volumes of up to 1.75 percent of the total fuel. The sulfur content of the used lubricating oil must be less than 200 parts per million. The used lubricating oil must meet the on-specification levels and properties for used oil in 40 CFR 279.11.

[76 FR 37971, June 28, 2011, as amended at 81 FR 44219, July 7, 2016]

§60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?

Owners and operators of stationary CI ICE that do not use diesel fuel may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in §60.4204 or §60.4205 using such fuels and that use of such fuel is appropriate and reasonably necessary, considering cost, energy, technical feasibility, human health and environmental, and other factors, for the operation of the engine.

[76 FR 37972, June 28, 2011]

General Provisions

§60.4218 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.
Definitions

§60.4219 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.

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

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 CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for certified emissions life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

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.

Date of manufacture means one of the following things:

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

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

(3) Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

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.

Diesel particulate filter means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

Emergency stationary internal combustion engine means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in §60.4211(f) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in §60.4211(f), then it is not considered to be an emergency stationary ICE under this subpart.

(1) The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. 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.

(2) The stationary ICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §60.4211(f).

(3) The stationary ICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §60.4211(f)(2)(ii) or (iii) and §60.4211(f)(3)(i).

*Engine manufacturer* means the manufacturer of the engine. See the definition of “manufacturer” in this section.

*Fire pump engine* means an emergency stationary internal combustion engine certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.

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

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

*Manufacturer* has the meaning given in section 216(1) of the 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 sale or resale.

*Maximum engine power* means maximum engine power as defined in 40 CFR 1039.801.

*Model year* means the calendar year in which an engine is manufactured (see “date of manufacture”), except as follows:

(1) Model year means the annual new model production period of the engine manufacturer in which an engine is manufactured (see “date of manufacture”), if the annual new model production period is different than the calendar year and includes 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.

(2) 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 manufactured (see “date of manufacture”).

*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.

*Reciprocating internal combustion engine* means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work.

*Remote areas of Alaska* means areas of Alaska that meet either paragraph (1) or (2) of this definition.

(1) Areas of Alaska that are not accessible by the Federal Aid Highway System (FAHS).

(2) Areas of Alaska that meet all of the following criteria:

(i) The only connection to the FAHS is through the Alaska Marine Highway System, or the stationary CI ICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary CI ICE on an annual basis is used for residential purposes.
(iii) The generating capacity of the source is less than 12 megawatts, or the stationary CI ICE is used exclusively for backup power for renewable energy.

*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 a gasoline, natural gas, or liquefied petroleum gas 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 CI 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, aircraft, or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

*Subpart* means 40 CFR part 60, subpart IIII.


**Table 1 to Subpart III of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007-2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder**

[As stated in §§60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

<table>
<thead>
<tr>
<th>Maximum engine power</th>
<th>Emission standards for stationary pre-2007 model year engines with a displacement of &lt;10 liters per cylinder and 2007-2010 model year engines &gt;2,237 KW (3,000 HP) and with a displacement of &lt;10 liters per cylinder in g/KW-hr (g/HP-hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NMHC + NOx</td>
<td>HC</td>
</tr>
<tr>
<td>KW&lt;8 (HP&lt;11)</td>
<td>10.5 (7.8)</td>
</tr>
<tr>
<td>8≤KW&lt;19 (11≤HP&lt;25)</td>
<td>9.5 (7.1)</td>
</tr>
<tr>
<td>19≤KW&lt;37 (25≤HP&lt;50)</td>
<td>9.5 (7.1)</td>
</tr>
<tr>
<td>37≤KW&lt;56 (50≤HP&lt;75)</td>
<td>9.2 (6.9)</td>
</tr>
<tr>
<td>56≤KW&lt;75 (75≤HP&lt;100)</td>
<td>9.2 (6.9)</td>
</tr>
<tr>
<td>75≤KW&lt;130 (100≤HP&lt;175)</td>
<td>9.2 (6.9)</td>
</tr>
<tr>
<td>130≤KW&lt;225 (175≤HP&lt;300)</td>
<td>1.3 (1.0)</td>
</tr>
<tr>
<td>225≤KW&lt;450 (300≤HP&lt;600)</td>
<td>1.3 (1.0)</td>
</tr>
</tbody>
</table>
### Table 2 to Subpart IIII of Part 60—Emission Standards for 2008 Model Year and Later Emergency Stationary CI ICE <37 KW (50 HP) With a Displacement of <10 Liters per Cylinder

<table>
<thead>
<tr>
<th>Engine power</th>
<th>NOx + NMHC</th>
<th>CO</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>KW&lt;8 (HP&lt;11)</td>
<td>7.5 (5.6)</td>
<td>8.0 (6.0)</td>
<td>0.40 (0.30)</td>
</tr>
<tr>
<td>8≤KW&lt;19 (11≤HP&lt;25)</td>
<td>7.5 (5.6)</td>
<td>6.6 (4.9)</td>
<td>0.40 (0.30)</td>
</tr>
<tr>
<td>19≤KW&lt;37 (25≤HP&lt;50)</td>
<td>7.5 (5.6)</td>
<td>5.5 (4.1)</td>
<td>0.30 (0.22)</td>
</tr>
</tbody>
</table>

### Table 3 to Subpart IIII of Part 60—Certification Requirements for Stationary Fire Pump Engines

<table>
<thead>
<tr>
<th>Engine power</th>
<th>Starting model year engine manufacturers must certify new stationary fire pump engines according to §60.4202(d)¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>KW&lt;75 (HP&lt;100)</td>
<td>2011</td>
</tr>
<tr>
<td>75≤KW&lt;130 (100≤HP&lt;175)</td>
<td>2010</td>
</tr>
<tr>
<td>130≤KW≤560 (175≤HP≤750)</td>
<td>2009</td>
</tr>
<tr>
<td>KW&gt;560 (HP&gt;750)</td>
<td>2008</td>
</tr>
</tbody>
</table>

¹Manufacturers of fire pump stationary CI ICE with a maximum engine power greater than or equal to 37 KW (50 HP) and less than 450 KW (600 HP) and a rated speed of greater than 2,650 revolutions per minute (rpm) are not required to certify such engines until three model years following the model year indicated in this Table 3 for engines in the applicable engine power category.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011]
Table 4 to Subpart IIII of Part 60—Emission Standards for Stationary Fire Pump Engines

[As stated in §§60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

<table>
<thead>
<tr>
<th>Maximum engine power</th>
<th>Model year(s)</th>
<th>NMHC + NO&lt;sub&gt;x&lt;/sub&gt;</th>
<th>CO</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>KW&lt;8 (HP&lt;11)</td>
<td>2010 and earlier</td>
<td>10.5 (7.8)</td>
<td>8.0 (6.0)</td>
<td>1.0 (0.75)</td>
</tr>
<tr>
<td></td>
<td>2011 +</td>
<td>7.5 (5.6)</td>
<td>0.40 (0.30)</td>
<td></td>
</tr>
<tr>
<td>8≤KW&lt;19 (11≤HP&lt;25)</td>
<td>2010 and earlier</td>
<td>9.5 (7.1)</td>
<td>6.6 (4.9)</td>
<td>0.80 (0.60)</td>
</tr>
<tr>
<td></td>
<td>2011 +</td>
<td>7.5 (5.6)</td>
<td>0.40 (0.30)</td>
<td></td>
</tr>
<tr>
<td>19≤KW&lt;37 (25≤HP&lt;50)</td>
<td>2010 and earlier</td>
<td>9.5 (7.1)</td>
<td>5.5 (4.1)</td>
<td>0.80 (0.60)</td>
</tr>
<tr>
<td></td>
<td>2011 +</td>
<td>7.5 (5.6)</td>
<td>0.30 (0.22)</td>
<td></td>
</tr>
<tr>
<td>37≤KW&lt;56 (50≤HP&lt;75)</td>
<td>2010 and earlier</td>
<td>10.5 (7.8)</td>
<td>5.0 (3.7)</td>
<td>0.80 (0.60)</td>
</tr>
<tr>
<td></td>
<td>2011 +&lt;sup&gt;1&lt;/sup&gt;</td>
<td>4.7 (3.5)</td>
<td></td>
<td>0.40 (0.30)</td>
</tr>
<tr>
<td>56≤KW&lt;75 (75≤HP&lt;100)</td>
<td>2010 and earlier</td>
<td>10.5 (7.8)</td>
<td>5.0 (3.7)</td>
<td>0.80 (0.60)</td>
</tr>
<tr>
<td></td>
<td>2011 +&lt;sup&gt;1&lt;/sup&gt;</td>
<td>4.7 (3.5)</td>
<td></td>
<td>0.40 (0.30)</td>
</tr>
<tr>
<td>75≤KW&lt;130 (100≤HP&lt;175)</td>
<td>2009 and earlier</td>
<td>10.5 (7.8)</td>
<td>5.0 (3.7)</td>
<td>0.80 (0.60)</td>
</tr>
<tr>
<td></td>
<td>2010 +&lt;sup&gt;2&lt;/sup&gt;</td>
<td>4.0 (3.0)</td>
<td></td>
<td>0.30 (0.22)</td>
</tr>
<tr>
<td>130≤KW&lt;225 (175≤HP&lt;300)</td>
<td>2008 and earlier</td>
<td>10.5 (7.8)</td>
<td>3.5 (2.6)</td>
<td>0.54 (0.40)</td>
</tr>
<tr>
<td></td>
<td>2009 +&lt;sup&gt;3&lt;/sup&gt;</td>
<td>4.0 (3.0)</td>
<td></td>
<td>0.20 (0.15)</td>
</tr>
<tr>
<td>225≤KW&lt;450 (300≤HP&lt;600)</td>
<td>2008 and earlier</td>
<td>10.5 (7.8)</td>
<td>3.5 (2.6)</td>
<td>0.54 (0.40)</td>
</tr>
<tr>
<td></td>
<td>2009 +&lt;sup&gt;3&lt;/sup&gt;</td>
<td>4.0 (3.0)</td>
<td></td>
<td>0.20 (0.15)</td>
</tr>
<tr>
<td>450≤KW≤560 (600≤HP≤750)</td>
<td>2008 and earlier</td>
<td>10.5 (7.8)</td>
<td>3.5 (2.6)</td>
<td>0.54 (0.40)</td>
</tr>
<tr>
<td></td>
<td>2009 +</td>
<td>4.0 (3.0)</td>
<td></td>
<td>0.20 (0.15)</td>
</tr>
<tr>
<td>KW&gt;560 (HP&gt;750)</td>
<td>2007 and earlier</td>
<td>10.5 (7.8)</td>
<td>3.5 (2.6)</td>
<td>0.54 (0.40)</td>
</tr>
<tr>
<td></td>
<td>2008 +</td>
<td>6.4 (4.8)</td>
<td></td>
<td>0.20 (0.15)</td>
</tr>
</tbody>
</table>

<sup>1</sup>For model years 2011-2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.

<sup>2</sup>For model years 2010-2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

<sup>3</sup>In model years 2009-2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.
Table 5 to Subpart IIII of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines

[You must comply with the labeling requirements in §60.4210(f) and the recordkeeping requirements in §60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

<table>
<thead>
<tr>
<th>Engine power</th>
<th>Starting model year</th>
</tr>
</thead>
<tbody>
<tr>
<td>19≤KW&lt;56 (25≤HP&lt;75)</td>
<td>2013</td>
</tr>
<tr>
<td>56≤KW&lt;130 (75≤HP&lt;175)</td>
<td>2012</td>
</tr>
<tr>
<td>KW≥130 (HP≥175)</td>
<td>2011</td>
</tr>
</tbody>
</table>

Table 6 to Subpart IIII of Part 60—Optional 3-Mode Test Cycle for Stationary Fire Pump Engines

[As stated in §60.4210(g), manufacturers of fire pump engines may use the following test cycle for testing fire pump engines:]

<table>
<thead>
<tr>
<th>Mode No.</th>
<th>Engine speed¹</th>
<th>Torque (percent)²</th>
<th>Weighting factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rated</td>
<td>100</td>
<td>0.30</td>
</tr>
<tr>
<td>2</td>
<td>Rated</td>
<td>75</td>
<td>0.50</td>
</tr>
<tr>
<td>3</td>
<td>Rated</td>
<td>50</td>
<td>0.20</td>
</tr>
</tbody>
</table>

¹Engine speed: ±2 percent of point.

²Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.
Table 7 to Subpart III of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥30 Liters per Cylinder

As stated in §60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥30 liters per cylinder:

<table>
<thead>
<tr>
<th>Each</th>
<th>Complying with the requirement to</th>
<th>You must</th>
<th>Using</th>
<th>According to the following requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Stationary CI internal combustion engine with a displacement of ≥ 30 liters per cylinder</td>
<td>a. Reduce NOX emissions by 90 percent or more;</td>
<td>i. Select the sampling port location and number/location of traverse points at the inlet and outlet of the control device;</td>
<td></td>
<td>(a) For NOX, O2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts &gt;6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (‘3-point long line’). If the duct is &gt;12 inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at ‘3-point long line’; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii. Measure O2 at the inlet and outlet of the control device;</td>
<td></td>
<td>(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2</td>
<td>(b) Measurements to determine O2 concentration must be made at the same time as the measurements for NOX concentration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(2) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)</td>
<td>(c) Measurements to determine moisture content must be made at the same time as the measurements for NOX concentration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(3) Method 7E of 40 CFR part 60, appendix A-4, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)</td>
<td>(d) NOX 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.</td>
</tr>
<tr>
<td></td>
<td>iii. If necessary, measure moisture content at the inlet and outlet of the control device; and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>iv. Measure NOX at the inlet and outlet of the control device.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Each</td>
<td>Complying with the requirement to</td>
<td>You must</td>
<td>Using</td>
<td>According to the following requirements</td>
</tr>
<tr>
<td>------</td>
<td>---------------------------------</td>
<td>----------</td>
<td>------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>b. Limit the concentration of NO\textsubscript{X} in the stationary CI internal combustion engine exhaust.</td>
<td>i. Select the sampling port location and number/location of traverse points at the exhaust of the stationary internal combustion engine;</td>
<td>(a)</td>
<td>(a) For NO\textsubscript{X}, O\textsubscript{2}, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts &gt;6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (&quot;3-point long line&quot;). If the duct is &gt;12 inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at &quot;3-point long line&quot;; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.</td>
<td></td>
</tr>
<tr>
<td>c. Reduce PM emissions by 60 percent or more</td>
<td>i. Select the sampling port location and the number of traverse points;</td>
<td>(1) Method 1 or 1A of 40 CFR part 60, appendix A-1</td>
<td>(a) Sampling sites must be located at the inlet and outlet of the control device.</td>
<td></td>
</tr>
</tbody>
</table>
### Table 8 to Subpart III of Part 60—Applicability of General Provisions to Subpart III

Table 8 to Subpart III of Part 60—Applicability of General Provisions to Subpart III

As stated in §60.4218, you must comply with the following applicable General Provisions:

<table>
<thead>
<tr>
<th>General Provisions citation</th>
<th>Subject of citation</th>
<th>Applies to subpart</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>§60.1</td>
<td>General applicability of the General Provisions</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.2</td>
<td>Definitions</td>
<td>Yes</td>
<td>Additional terms defined in §60.4219.</td>
</tr>
<tr>
<td>General Provisions citation</td>
<td>Subject of citation</td>
<td>Applies to subpart</td>
<td>Explanation</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------------------------------</td>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>§60.3</td>
<td>Units and abbreviations</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.4</td>
<td>Address</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.5</td>
<td>Determination of construction or</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>modification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§60.6</td>
<td>Review of plans</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.7</td>
<td>Notification and Recordkeeping</td>
<td>Yes</td>
<td>Except that §60.7 only applies as specified in §60.4214(a).</td>
</tr>
<tr>
<td>§60.8</td>
<td>Performance tests</td>
<td>Yes</td>
<td>Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified.</td>
</tr>
<tr>
<td>§60.9</td>
<td>Availability of information</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.10</td>
<td>State Authority</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.11</td>
<td>Compliance with standards and</td>
<td>No</td>
<td>Requirements are specified in subpart IIII.</td>
</tr>
<tr>
<td></td>
<td>maintenance requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§60.12</td>
<td>Circumvention</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.13</td>
<td>Monitoring requirements</td>
<td>Yes</td>
<td>Except that §60.13 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder.</td>
</tr>
<tr>
<td>§60.14</td>
<td>Modification</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.15</td>
<td>Reconstruction</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.16</td>
<td>Priority list</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.17</td>
<td>Incorporations by reference</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.18</td>
<td>General control device</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§60.19</td>
<td>General notification and reporting</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>requirements</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart CCCCC—National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

Source: 73 FR 1945, Jan. 10, 2008, unless otherwise noted.

What This Subpart Covers

§ 63.11110 What is the purpose of this subpart?

This subpart establishes national emission limitations and management practices for hazardous air pollutants (HAP) emitted from the loading of gasoline storage tanks at gasoline dispensing facilities (GDF). This subpart also establishes requirements to demonstrate compliance with the emission limitations and management practices.

§ 63.11111 Am I subject to the requirements in this subpart?

(a) The affected source to which this subpart applies is each GDF that is located at an area source. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank.

(b) If your GDF has a monthly throughput of less than 10,000 gallons of gasoline, you must comply with the requirements in § 63.11116.

(c) If your GDF has a monthly throughput of 10,000 gallons of gasoline or more, you must comply with the requirements in § 63.11117.

(d) If your GDF has a monthly throughput of 100,000 gallons of gasoline or more, you must comply with the requirements in § 63.11118.

(e) An affected source shall, upon request by the Administrator, demonstrate that their monthly throughput is less than the 10,000-gallon or the 100,000-gallon threshold level, as applicable. For new or reconstructed affected sources, as specified in § 63.11112(b) and (c), recordkeeping to document monthly throughput must begin upon startup of the affected source. For existing sources, as specified in § 63.11112(d), recordkeeping to document monthly throughput must begin on January 10, 2008. For existing sources that are subject to this subpart only because they load gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, recordkeeping to document monthly throughput must begin on January 24, 2011. Records required under this paragraph shall be kept for a period of 5 years.

(f) If you are an owner or operator of affected sources, as defined in paragraph (a) of this section, you are not required to obtain a permit under 40 CFR part 70 or 40 CFR part 71 as a result of being subject to this subpart. However, you must still apply for and obtain a permit under 40 CFR part 70 or 40 CFR part 71 if you meet one or more of the applicability criteria found in 40 CFR 70.3(a) and (b) or 40 CFR 71.3(a) and (b).
(g) The loading of aviation gasoline into storage tanks at airports, and the subsequent transfer of aviation gasoline within the airport, is not subject to this subpart.

(h) Monthly throughput is the total volume of gasoline loaded into, or dispensed from, all the gasoline storage tanks located at a single affected GDF. If an area source has two or more GDF at separate locations within the area source, each GDF is treated as a separate affected source.

(i) If your affected source’s throughput ever exceeds an applicable throughput threshold, the affected source will remain subject to the requirements for sources above the threshold, even if the affected source throughput later falls below the applicable throughput threshold.

(j) The dispensing of gasoline from a fixed gasoline storage tank at a GDF into a portable gasoline tank for the on-site delivery and subsequent dispensing of the gasoline into the fuel tank of a motor vehicle or other gasoline-fueled engine or equipment used within the area source is only subject to § 63.11116 of this subpart.

(k) For any affected source subject to the provisions of this subpart and another Federal rule, you may elect to comply only with the more stringent provisions of the applicable subparts. You must consider all provisions of the rules, including monitoring, recordkeeping, and reporting. You must identify the affected source and provisions with which you will comply in your Notification of Compliance Status required under § 63.11124. You also must demonstrate in your Notification of Compliance Status that each provision with which you will comply is at least as stringent as the otherwise applicable requirements in this subpart. You are responsible for making accurate determinations concerning the more stringent provisions, and noncompliance with this rule is not excused if it is later determined that your determination was in error, and, as a result, you are violating this subpart. Compliance with this rule is your responsibility and the Notification of Compliance Status does not alter or affect that responsibility.


§ 63.11112 What parts of my affected source does this subpart cover?

(a) The emission sources to which this subpart applies are gasoline storage tanks and associated equipment components in vapor or liquid gasoline service at new, reconstructed, or existing GDF that meet the criteria specified in § 63.11111. Pressure/Vacuum vents on gasoline storage tanks and the equipment necessary to unload product from cargo tanks into the storage tanks at GDF are covered emission sources. The equipment used for the refueling of motor vehicles is not covered by this subpart.

(b) An affected source is a new affected source if you commenced construction on the affected source after November 9, 2006, and you meet the applicability criteria in § 63.11111 at the time you commenced operation.

(c) An affected source is reconstructed if you meet the criteria for reconstruction as defined in § 63.2.

(d) An affected source is an existing affected source if it is not new or reconstructed.

§ 63.11113 When do I have to comply with this subpart?

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to paragraphs (a)(1) and (2) of this section, except as specified in paragraph (d) of this section.

(1) If you start up your affected source before January 10, 2008, you must comply with the standards in this subpart no later than January 10, 2008.

(2) If you start up your affected source after January 10, 2008, you must comply with the standards in this subpart upon startup of your affected source.

(b) If you have an existing affected source, you must comply with the standards in this subpart no later than January 10, 2011.
(c) If you have an existing affected source that becomes subject to the control requirements in this subpart because of an increase in the monthly throughput, as specified in § 63.11111(c) or § 63.11111(d), you must comply with the standards in this subpart no later than 3 years after the affected source becomes subject to the control requirements in this subpart.

(d) If you have a new or reconstructed affected source and you are complying with Table 1 to this subpart, you must comply according to paragraphs (d)(1) and (2) of this section.

(1) If you start up your affected source from November 9, 2006 to September 23, 2008, you must comply no later than September 23, 2008.

(2) If you start up your affected source after September 23, 2008, you must comply upon startup of your affected source.

(e) The initial compliance demonstration test required under § 63.11120(a)(1) and (2) must be conducted as specified in paragraphs (e)(1) and (2) of this section.

(1) If you have a new or reconstructed affected source, you must conduct the initial compliance test upon installation of the complete vapor balance system.

(2) If you have an existing affected source, you must conduct the initial compliance test as specified in paragraphs (e)(2)(i) or (e)(2)(ii) of this section.

(i) For vapor balance systems installed on or before December 15, 2009, you must test no later than 180 days after the applicable compliance date specified in paragraphs (b) or (c) of this section.

(ii) For vapor balance systems installed after December 15, 2009, you must test upon installation of the complete vapor balance system.

(f) If your GDF is subject to the control requirements in this subpart only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, you must comply with the standards in this subpart as specified in paragraphs (f)(1) or (f)(2) of this section.

(1) If your GDF is an existing facility, you must comply by January 24, 2014.

(2) If your GDF is a new or reconstructed facility, you must comply by the dates specified in paragraphs (f)(2)(i) and (ii) of this section.

(i) If you start up your GDF after December 15, 2009, but before January 24, 2011, you must comply no later than January 24, 2011.

(ii) If you start up your GDF after January 24, 2011, you must comply upon startup of your GDF.


Emission Limitations and Management Practices

§ 63.11115 What are my general duties to minimize emissions?

Each owner or operator of an affected source under this subpart must comply with the requirements of paragraphs (a) and (b) of this section.

(a) You must, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. 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.

(b) You must keep applicable records and submit reports as specified in § 63.11125(d) and § 63.11126(b).

[76 FR 4182, Jan. 24, 2011]

§ 63.11116 Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline.

(a) You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

1. Minimize gasoline spills;

2. Clean up spills as expeditiously as practicable;

3. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;

4. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

(b) You are not required to submit notifications or reports as specified in § 63.11125, § 63.11126, or subpart A of this part, but you must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(c) You must comply with the requirements of this subpart by the applicable dates specified in § 63.11113.

(d) Portable gasoline containers that meet the requirements of 40 CFR part 59, subpart F, are considered acceptable for compliance with paragraph (a)(3) of this section.


§ 63.11117 Requirements for facilities with monthly throughput of 10,000 gallons of gasoline or more.

(a) You must comply with the requirements in section § 63.11116(a).

(b) Except as specified in paragraph (c) of this section, you must only load gasoline into storage tanks at your facility by utilizing submerged filling, as defined in § 63.11132, and as specified in paragraphs (b)(1), (b)(2), or (b)(3) of this section. The applicable distances in paragraphs (b)(1) and (2) shall be measured from the point in the opening of the submerged fill pipe that is the greatest distance from the bottom of the storage tank.

1. Submerged fill pipes installed on or before November 9, 2006, must be no more than 12 inches from the bottom of the tank.

2. Submerged fill pipes installed after November 9, 2006, must be no more than 6 inches from the bottom of the tank.

3. Submerged fill pipes not meeting the specifications of paragraphs (b)(1) or (b)(2) of this section are allowed if the owner or operator can demonstrate that the liquid level in the tank is always above the entire opening of the fill pipe. Documentation providing such demonstration must be made available for inspection by the Administrator’s delegated representative during the course of a site visit.

(c) Gasoline storage tanks with a capacity of less than 250 gallons are not required to comply with the submerged fill requirements in paragraph (b) of this section, but must comply only with all of the requirements in § 63.11116.
(d) You must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(e) You must submit the applicable notifications as required under § 63.11124(a).

(f) You must comply with the requirements of this subpart by the applicable dates contained in § 63.11113.


§ 63.11118 Requirements for facilities with monthly throughput of 100,000 gallons of gasoline or more.

(a) You must comply with the requirements in §§ 63.11116(a) and 63.11117(b).

(b) Except as provided in paragraph (c) of this section, you must meet the requirements in either paragraph (b)(1) or paragraph (b)(2) of this section.

(1) Each management practice in Table 1 to this subpart that applies to your GDF.

(2) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(2)(i) and (ii) of this section, you will be deemed in compliance with this subsection.

(i) You operate a vapor balance system at your GDF that meets the requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.

(c) The emission sources listed in paragraphs (c)(1) through (3) of this section are not required to comply with the control requirements in paragraph (b) of this section, but must comply with the requirements in § 63.11117.

(1) Gasoline storage tanks with a capacity of less than 250 gallons that are constructed after January 10, 2008.

(2) Gasoline storage tanks with a capacity of less than 2,000 gallons that were constructed before January 10, 2008.

(3) Gasoline storage tanks equipped with floating roofs, or the equivalent.

(d) Cargo tanks unloading at GDF must comply with the management practices in Table 2 to this subpart.

(e) You must comply with the applicable testing requirements contained in § 63.11120.

(f) You must submit the applicable notifications as required under § 63.11124.

(g) You must keep records and submit reports as specified in §§ 63.11125 and 63.11126.

(h) You must comply with the requirements of this subpart by the applicable dates contained in § 63.11113.

Testing and Monitoring Requirements

§ 63.11120 What testing and monitoring requirements must I meet?

(a) Each owner or operator, at the time of installation, as specified in § 63.11113(e), of a vapor balance system required under § 63.11118(b)(1), and every 3 years thereafter, must comply with the requirements in paragraphs (a)(1) and (2) of this section.

(1) You must demonstrate compliance with the leak rate and cracking pressure requirements, specified in item 1(g) of Table 1 to this subpart, for pressure-vacuum vent valves installed on your gasoline storage tanks using the test methods identified in paragraph (a)(1)(i) or paragraph (a)(1)(ii) of this section.

(i) California Air Resources Board Vapor Recovery Test Procedure TP-201.1E,—Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, adopted October 8, 2003 (incorporated by reference, see § 63.14).

(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in § 63.7(f).

(2) You must demonstrate compliance with the static pressure performance requirement specified in item 1(h) of Table 1 to this subpart for your vapor balance system by conducting a static pressure test on your gasoline storage tanks using the test methods identified in paragraphs (a)(2)(i), (a)(2)(ii), or (a)(2)(iii) of this section.


(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in § 63.7(f).


(b) Each owner or operator choosing, under the provisions of § 63.6(g), to use a vapor balance system other than that described in Table 1 to this subpart must demonstrate to the Administrator or delegated authority under paragraph § 63.11131(a) of this subpart, the equivalency of their vapor balance system to that described in Table 1 to this subpart using the procedures specified in paragraphs (b)(1) through (3) of this section.

(1) You must demonstrate initial compliance by conducting an initial performance test on the vapor balance system to demonstrate that the vapor balance system achieves 95 percent reduction using the California Air Resources Board Vapor Recovery Test Procedure TP-201.1,—Volumetric Efficiency for Phase I Vapor Recovery Systems, adopted April 12, 1996, and amended February 1, 2001, and October 8, 2003, (incorporated by reference, see § 63.14).

(2) You must, during the initial performance test required under paragraph (b)(1) of this section, determine and document alternative acceptable values for the leak rate and cracking pressure requirements specified in item 1(g) of Table 1 to this subpart and for the static pressure performance requirement in item 1(h) of Table 1 to this subpart.

(3) You must comply with the testing requirements specified in paragraph (a) of this section.

(c) Conduct of performance tests. Performance tests conducted for this subpart shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (i.e., performance based on normal operating conditions) of the affected source. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(d) Owners and operators of gasoline cargo tanks subject to the provisions of Table 2 to this subpart must conduct annual certification testing according to the vapor tightness testing requirements found in § 63.11092(f).
Notifications, Records, and Reports

§ 63.11124  What notifications must I submit and when?

(a) Each owner or operator subject to the control requirements in § 63.11117 must comply with paragraphs (a)(1) through (3) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in § 63.11117, unless you meet the requirements in paragraph (a)(3) of this section. If your affected source is subject to the control requirements in § 63.11117 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, you must submit the Initial Notification by May 24, 2011. The Initial Notification must contain the information specified in paragraphs (a)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in § 63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of § 63.11117 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in § 63.13, within 60 days of the applicable compliance date specified in § 63.11113, unless you meet the requirements in paragraph (a)(3) of this section. The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facilities' monthly throughput is calculated based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (a)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (a)(1) of this section.

(3) If, prior to January 10, 2008, you are operating in compliance with an enforceable State, local, or tribal rule or permit that requires submerged fill as specified in § 63.11117(b), you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (a)(1) or paragraph (a)(2) of this section.

(b) Each owner or operator subject to the control requirements in § 63.11118 must comply with paragraphs (b)(1) through (5) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in § 63.11118. If your affected source is subject to the control requirements in § 63.11118 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, you must submit the Initial Notification by May 24, 2011. The Initial Notification must contain the information specified in paragraphs (b)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in § 63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of § 63.11118 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in § 63.13, in accordance with the schedule specified in § 63.9(h). The Notification of
Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facility's throughput is determined based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (b)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (b)(1) of this section.

(3) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(3)(i) and (ii) of this section, you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (b)(1) or paragraph (b)(2) of this subsection.

(i) You operate a vapor balance system at your gasoline dispensing facility that meets the requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(4) You must submit a Notification of Performance Test, as specified in § 63.9(e), prior to initiating testing required by § 63.11120(a) and (b).

(5) You must submit additional notifications specified in § 63.9, as applicable.


§ 63.11125 What are my recordkeeping requirements?

(a) Each owner or operator subject to the management practices in § 63.11118 must keep records of all tests performed under § 63.11120(a) and (b).

(b) Records required under paragraph (a) of this section shall be kept for a period of 5 years and shall be made available for inspection by the Administrator's delegated representatives during the course of a site visit.

(c) Each owner or operator of a gasoline cargo tank subject to the management practices in Table 2 to this subpart must keep records documenting vapor tightness testing for a period of 5 years. Documentation must include each of the items specified in § 63.11094(b)(2)(i) through (viii). Records of vapor tightness testing must be retained as specified in either paragraph (c)(1) or paragraph (c)(2) of this section.

(1) The owner or operator must keep all vapor tightness testing records with the cargo tank.

(2) As an alternative to keeping all records with the cargo tank, the owner or operator may comply with the requirements of paragraphs (c)(2)(i) and (ii) of this section.

(i) The owner or operator may keep records of only the most recent vapor tightness test with the cargo tank, and keep records for the previous 4 years at their office or another central location.

(ii) Vapor tightness testing records that are kept at a location other than with the cargo tank must be instantly available (e.g., via e-mail or facsimile) to the Administrator's delegated representative during the course of a site visit or within a mutually agreeable time frame. Such records must be an exact duplicate image of the original paper copy record with certifying signatures.
(d) Each owner or operator of an affected source under this subpart shall keep records as specified in paragraphs (d)(1) and (2) of this section.

(1) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.

(2) Records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.11115(a), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.


§ 63.11126 What are my reporting requirements?

(a) Each owner or operator subject to the management practices in §63.11118 shall report to the Administrator the results of all volumetric efficiency tests required under §63.11120(b). Reports submitted under this paragraph must be submitted within 180 days of the completion of the performance testing.

(b) Each owner or operator of an affected source under this subpart shall report, by March 15 of each year, the number, duration, and a brief description of each type of malfunction which occurred during the previous calendar year and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.11115(a), including actions taken to correct a malfunction. No report is necessary for a calendar year in which no malfunctions occurred.

[76 FR 4183, Jan. 24, 2011]

Other Requirements and Information

§ 63.11130 What parts of the General Provisions apply to me?

Table 3 to this subpart shows which parts of the General Provisions apply to you.

§ 63.11131 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as the applicable State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or tribal agency.

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

(c) The authorities that cannot be delegated to State, local, or tribal agencies are as specified in paragraphs (c)(1) through (3) of this section.

(1) Approval of alternatives to the requirements in §§63.11116 through 63.11118 and 63.11120.

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

(3) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.
§ 63.11132 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act (CAA), or in subparts A and BBBBB of this part. For purposes of this subpart, definitions in this section supersede definitions in other parts or subparts.

Dual-point vapor balance system means a type of vapor balance system in which the storage tank is equipped with an entry port for a gasoline fill pipe and a separate exit port for a vapor connection.

Gasoline means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater, which is used as a fuel for internal combustion engines.

Gasoline cargo tank means a delivery tank truck or railcar which is loading or unloading gasoline, or which has loaded or unloaded gasoline on the immediately previous load.

Gasoline dispensing facility (GDF) means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine used solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline-fueled engines and equipment.

Monthly throughput means the total volume of gasoline that is loaded into, or dispensed from, all gasoline storage tanks at each GDF during a month. Monthly throughput is calculated by summing the volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the current day, plus the total volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the previous 364 days, and then dividing that sum by 12.

Motor vehicle means any self-propelled vehicle designed for transporting persons or property on a street or highway.

Nonroad engine means an internal combustion engine (including the fuel system) that is not used in a motor vehicle or a vehicle used solely for competition, or that is not subject to standards promulgated under section 7411 of this title or section 7521 of this title.

Nonroad vehicle means a vehicle that is powered by a nonroad engine, and that is not a motor vehicle or a vehicle used solely for competition.

Submerged filling means, for the purposes of this subpart, the filling of a gasoline storage tank through a submerged fill pipe whose discharge is no more than the applicable distance specified in § 63.11117(b) from the bottom of the tank. Bottom filling of gasoline storage tanks is included in this definition.

Vapor balance system means a combination of pipes and hoses that create a closed system between the vapor spaces of an unloading gasoline cargo tank and a receiving storage tank such that vapors displaced from the storage tank are transferred to the gasoline cargo tank being unloaded.

Vapor-tight means equipment that allows no loss of vapors. Compliance with vapor-tight requirements can be determined by checking to ensure that the concentration at a potential leak source is not equal to or greater than 100 percent of the Lower Explosive Limit when measured with a combustible gas detector, calibrated with propane, at a distance of 1 inch from the source.

Vapor-tight gasoline cargo tank means a gasoline cargo tank which has demonstrated within the 12 preceding months that it meets the annual certification test requirements in § 63.11092(f) of this part.

Table 1 to Subpart CCCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More

<table>
<thead>
<tr>
<th>If you own or operate</th>
<th>Then you must</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A new, reconstructed, or existing GDF subject to § 63.11118</td>
<td>Install and operate a vapor balance system on your gasoline storage tanks that meets the design criteria in paragraphs (a) through (h).</td>
</tr>
<tr>
<td>(a) All vapor connections and lines on the storage tank shall be equipped with closures that seal upon disconnect.</td>
<td></td>
</tr>
<tr>
<td>(b) The vapor line from the gasoline storage tank to the gasoline cargo tank shall be vapor-tight, as defined in § 63.11132.</td>
<td></td>
</tr>
<tr>
<td>(c) The vapor balance system shall be designed such that the pressure in the tank truck does not exceed 18 inches water pressure or 5.9 inches water vacuum during product transfer.</td>
<td></td>
</tr>
<tr>
<td>(d) The vapor recovery and product adaptors, and the method of connection with the delivery elbow, shall be designed so as to prevent the over-tightening or loosening of fittings during normal delivery operations.</td>
<td></td>
</tr>
<tr>
<td>(e) If a gauge well separate from the fill tube is used, it shall be provided with a submerged drop tube that extends the same distance from the bottom of the storage tank as specified in § 63.11117(b).</td>
<td></td>
</tr>
<tr>
<td>(f) Liquid fill connections for all systems shall be equipped with vapor-tight caps.</td>
<td></td>
</tr>
<tr>
<td>(g) Pressure/vacuum (PV) vent valves shall be installed on the storage tank vent pipes. The pressure specifications for PV vent valves shall be: a positive pressure setting of 2.5 to 6.0 inches of water and a negative pressure setting of 6.0 to 10.0 inches of water. The total leak rate of all PV vent valves at an affected facility, including connections, shall not exceed 0.17 cubic foot per hour at a pressure of 2.0 inches of water and 0.63 cubic foot per hour at a vacuum of 4 inches of water.</td>
<td></td>
</tr>
<tr>
<td>(h) The vapor balance system shall be capable of meeting the static pressure performance requirement of the following equation: [ Pf = 2e^{-\frac{500.887}{v}} ] Where: [ Pf = \text{Minimum allowable final pressure, inches of water.} ] [ v = \text{Total ullage affected by the test, gallons.} ] [ e = \text{Dimensionless constant equal to approximately 2.718.} ] [ 2 = \text{The initial pressure, inches water.} ]</td>
<td></td>
</tr>
<tr>
<td>2. A new or reconstructed GDF, or any storage tank(s) constructed after November 9, 2006, at an existing affected facility subject to § 63.11118</td>
<td>Equip your gasoline storage tanks with a dual-point vapor balance system, as defined in § 63.11132, and comply with the requirements of item 1 in this Table.</td>
</tr>
</tbody>
</table>
Table 2 to Subpart CCCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Cargo Tanks Unloading at Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More

<table>
<thead>
<tr>
<th>If you own or operate</th>
<th>Then you must</th>
</tr>
</thead>
<tbody>
<tr>
<td>A gasoline cargo tank</td>
<td>Not unload gasoline into a storage tank at a GDF subject to the control requirements in this subpart unless the following conditions are met:</td>
</tr>
<tr>
<td></td>
<td>(i) All hoses in the vapor balance system are properly connected;</td>
</tr>
<tr>
<td></td>
<td>(ii) The adapters or couplers that attach to the vapor line on the storage tank have closures that seal upon disconnect;</td>
</tr>
<tr>
<td></td>
<td>(iii) All vapor return hoses, couplers, and adapters used in the gasoline delivery are vapor-tight;</td>
</tr>
<tr>
<td></td>
<td>(iv) All tank truck vapor return equipment is compatible in size and forms a vapor-tight connection with the vapor balance equipment on the GDF storage tank, and</td>
</tr>
<tr>
<td></td>
<td>(v) All hatches on the tank truck are closed and securely fastened.</td>
</tr>
<tr>
<td></td>
<td>(vi) The filling of storage tanks at GDF shall be limited to unloading from vapor-tight gasoline cargo tanks. Documentation that the cargo tank has met the specifications of EPA Method 27 shall be carried with the cargo tank, as specified in § 63.11125(c).</td>
</tr>
</tbody>
</table>


Table 3 to Subpart CCCCCC of Part 63—Applicability of General Provisions

<table>
<thead>
<tr>
<th>Citation</th>
<th>Subject</th>
<th>Brief description</th>
<th>Applies to subpart CCCCCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>§ 63.1</td>
<td>Applicability</td>
<td>Initial applicability determination; applicability after standard established; permit requirements; extensions, notifications</td>
<td>Yes, specific requirements given in § 63.11111.</td>
</tr>
<tr>
<td>§ 63.1(c)(2)</td>
<td>Title V Permit</td>
<td>Requirements for obtaining a title V permit from the applicable permitting authority</td>
<td>Yes, § 63.11111(f) of subpart CCCCCC exempts identified area sources from the obligation to obtain title V operating permits.</td>
</tr>
<tr>
<td>§ 63.2</td>
<td>Definitions</td>
<td>Definitions for part 63 standards</td>
<td>Yes, additional definitions in § 63.11132.</td>
</tr>
<tr>
<td>§ 63.3</td>
<td>Units and Abbreviations</td>
<td>Units and abbreviations for part 63 standards</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.4</td>
<td>Prohibited Activities and Circumvention</td>
<td>Prohibited activities; Circumvention, severability</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.5</td>
<td>Construction/Reconstruction</td>
<td>Applicability; applications; approvals</td>
<td>Yes, except that these notifications are not required for facilities subject to § 63.11116</td>
</tr>
<tr>
<td>§ 63.6(a)</td>
<td>Compliance with Standards/Operation &amp; Maintenance—Applicability</td>
<td>General Provisions apply unless compliance extension; General Provisions apply to area sources that become major</td>
<td>Yes.</td>
</tr>
<tr>
<td>Citation</td>
<td>Subject</td>
<td>Brief description</td>
<td>Applies to subpart CCCCCC</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>§ 63.6(b)(1)-(4)</td>
<td>Compliance Dates for New and Reconstructed Sources</td>
<td>Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for CAA section 112(f)</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.6(b)(5)</td>
<td>Notification</td>
<td>Must notify if commenced construction or reconstruction after proposal</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.6(b)(6)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§ 63.6(b)(7)</td>
<td>Compliance Dates for New and Reconstructed Area Sources That Become Major</td>
<td>Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(c)(1)-(2)</td>
<td>Compliance Dates for Existing Sources</td>
<td>Comply according to date in this subpart, which must be no later than 3 years after effective date; for CAA section 112(f) standards, comply within 90 days of effective date unless compliance extension</td>
<td>No. § 63.11113 specifies the compliance dates.</td>
</tr>
<tr>
<td>§ 63.6(c)(3)-(4)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§ 63.6(c)(5)</td>
<td>Compliance Dates for Existing Area Sources That Become Major</td>
<td>Area sources That become major must comply with major source standards by date indicated in this subpart or by equivalent time period (e.g., 3 years)</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(d)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>63.6(e)(1)(i)</td>
<td>General duty to minimize emissions</td>
<td>Operate to minimize emissions at all times; information Administrator will use to determine if operation and maintenance requirements were met.</td>
<td>No. See § 63.11115 for general duty requirement.</td>
</tr>
<tr>
<td>63.6(e)(1)(ii)</td>
<td>Requirement to correct malfunctions ASAP</td>
<td>Owner or operator must correct malfunctions as soon as possible.</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(e)(2)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§ 63.6(e)(3)</td>
<td>Startup, Shutdown, and Malfunction (SSM) Plan</td>
<td>Requirement for SSM plan; content of SSM plan; actions during SSM</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(f)(1)</td>
<td>Compliance Except During SSM</td>
<td>You must comply with emission standards at all times except during SSM</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(f)(2)-(3)</td>
<td>Methods for Determining Compliance</td>
<td>Compliance based on performance test, operation and maintenance plans, records, inspection</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.6(g)(1)-(3)</td>
<td>Alternative Standard</td>
<td>Procedures for getting an alternative standard</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.6(h)(1)</td>
<td>Compliance with Opacity/Visible Emission (VE) Standards</td>
<td>You must comply with opacity/VE standards at all times except during SSM</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(2)(i)</td>
<td>Determining Compliance with Opacity/VE Standards</td>
<td>If standard does not State test method, use EPA Method 9 for opacity in appendix A of part 60 of this chapter and EPA Method 22 for VE in appendix A of part 60 of this chapter</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(2)(ii)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citation</td>
<td>Subject</td>
<td>Brief description</td>
<td>Applies to subpart CCCCCC</td>
</tr>
<tr>
<td>------------------</td>
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</tr>
<tr>
<td>§ 63.6(h)(2)(iii)</td>
<td>Using Previous Tests To Demonstrate Compliance WithOpacity/VE Standards</td>
<td>Criteria for when previous opacity/VE testing can be used to show compliance with this subpart</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(3)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§ 63.6(h)(4)</td>
<td>Notification of Opacity/VE Observation Date</td>
<td>Must notify Administrator of anticipated date of observation</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(5)(i), (iii)-(v)</td>
<td>Conducting Opacity/VE Observations</td>
<td>Dates and schedule for conducting opacity/VE observations</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(5)(ii)</td>
<td>Opacity Test Duration and Averaging Times</td>
<td>Must have at least 3 hours of observation with 30 6-minute averages</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(6)</td>
<td>Records of Conditions During Opacity/VE Observations</td>
<td>Must keep records available and allow Administrator to inspect</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(7)(i)</td>
<td>Report Continuous Opacity Monitoring System (COMS) Monitoring Data From Performance Test</td>
<td>Must submit COMS data with other performance test data</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(7)(ii)</td>
<td>Using COMS Instead of EPA Method 9</td>
<td>Can submit COMS data instead of EPA Method 9 results even if rule requires EPA Method 9 in appendix A of part 60 of this chapter, but must notify Administrator before performance test</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(7)(iii)</td>
<td>Averaging Time for COMS During Performance Test</td>
<td>To determine compliance, must reduce COMS data to 6-minute averages</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(7)(iv)</td>
<td>COMS Requirements</td>
<td>Owner/operator must demonstrate that COMS performance evaluations are conducted according to § 63.8(e); COMS are properly maintained and operated according to § 63.8(c) and data quality as § 63.8(d)</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(7)(v)</td>
<td>Determining Compliance with Opacity/VE Standards</td>
<td>COMS is probable but not conclusive evidence of compliance with opacity standard, even if EPA Method 9 observation shows otherwise. Requirements for COMS to be probable evidence-proper maintenance, meeting Performance Specification 1 in appendix B of part 60 of this chapter, and data have not been altered</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(8)</td>
<td>Determining Compliance with Opacity/VE Standards</td>
<td>Administrator will use all COMS, EPA Method 9 (in appendix A of part 60 of this chapter), and EPA Method 22 (in appendix A of part 60 of this chapter) results, as well as information about operation and maintenance to determine compliance</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(9)</td>
<td>Adjusted Opacity Standard</td>
<td>Procedures for Administrator to adjust an opacity standard</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(j)(1)-(14)</td>
<td>Compliance Extension</td>
<td>Procedures and criteria for Administrator to grant compliance extension</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.6(j)</td>
<td>Presidential Compliance Exemption</td>
<td>President may exempt any source from requirement to comply with this subpart</td>
<td>Yes.</td>
</tr>
<tr>
<td>Citation</td>
<td>Subject</td>
<td>Brief description</td>
<td>Applies to subpart CCCCCC</td>
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</tr>
<tr>
<td>§ 63.7(a)(2)</td>
<td>Performance Test Dates</td>
<td>Dates for conducting initial performance testing; must conduct 180 days after compliance date</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(a)(3)</td>
<td>CAA Section 114 Authority</td>
<td>Administrator may require a performance test under CAA section 114 at any time</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(b)(1)</td>
<td>Notification of Performance Test</td>
<td>Must notify Administrator 60 days before the test</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(b)(2)</td>
<td>Notification of Re-scheduling</td>
<td>If have to reschedule performance test, must notify Administrator of rescheduled date as soon as practicable and without delay</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.8(a)(1)</td>
<td>Applicability of Monitoring Requirements</td>
<td>Subject to all monitoring requirements in standard</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.8(a)(2)</td>
<td>Performance Specifications</td>
<td>Performance Specifications in appendix B of 40 CFR part 60 apply</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.8(a)(3)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§ 63.8(a)(4)</td>
<td>Monitoring of Flares</td>
<td>Monitoring requirements for flares in § 63.11 apply</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.8(b)(1)</td>
<td>Monitoring</td>
<td>Must conduct monitoring according to standard unless Administrator approves alternative</td>
<td>Yes.</td>
</tr>
<tr>
<td>Citation</td>
<td>Subject</td>
<td>Brief description</td>
<td>Applies to subpart CCCCCC</td>
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</tr>
<tr>
<td>§ 63.8(b)(2)-(3)</td>
<td>Multiple Effluents and Multiple Monitoring Systems</td>
<td>Specific requirements for installing monitoring systems; must install on each affected source or after combined with another affected source before it is released to the atmosphere provided the monitoring is sufficient to demonstrate compliance with the standard; if more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(c)(1)</td>
<td>Monitoring System Operation and Maintenance</td>
<td>Maintain monitoring system in a manner consistent with good air pollution control practices</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(c)(1)(i)-(iii)</td>
<td>Operation and Maintenance of Continuous Monitoring Systems (CMS)</td>
<td>Must maintain and operate each CMS as specified in § 63.6(e)(1); must keep parts for routine repairs readily available; must develop a written SSM plan for CMS, as specified in § 63.6(e)(3)</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(c)(2)-(8)</td>
<td>CMS Requirements</td>
<td>Must install to get representative emission or parameter measurements; must verify operational status before or at performance test</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(d)</td>
<td>CMS Quality Control</td>
<td>Requirements for CMS quality control, including calibration, etc.; must keep quality control plan on record for 5 years; keep old versions for 5 years after revisions</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(e)</td>
<td>CMS Performance Evaluation</td>
<td>Notification, performance evaluation test plan, reports</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(f)(1)-(5)</td>
<td>Alternative Monitoring Method</td>
<td>Procedures for Administrator to approve alternative monitoring</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(f)(6)</td>
<td>Alternative to Relative Accuracy Test</td>
<td>Procedures for Administrator to approve alternative relative accuracy tests for continuous emissions monitoring system (CEMS)</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(g)</td>
<td>Data Reduction</td>
<td>COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least 4 equally spaced data points; data that cannot be used in average</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.9(a)</td>
<td>Notification Requirements</td>
<td>Applicability and State delegation</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.9(b)(1)-(2), (4)-(5)</td>
<td>Initial Notifications</td>
<td>Submit notification within 120 days after effective date; notification of intent to construct/reconstruct, notification of commencement of construction/reconstruction, notification of startup; contents of each</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.9(c)</td>
<td>Request for Compliance Extension</td>
<td>Can request if cannot comply by date or if installed best available control technology or lowest achievable emission rate</td>
<td>Yes.</td>
</tr>
<tr>
<td>Citation</td>
<td>Subject</td>
<td>Brief description</td>
<td>Applies to subpart CCCCCC</td>
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</tr>
<tr>
<td>§ 63.9(d)</td>
<td>Notification of Special Compliance Requirements for New Sources</td>
<td>For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.9(e)</td>
<td>Notification of Performance Test</td>
<td>Notify Administrator 60 days prior</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.9(f)</td>
<td>Notification of VE/Opacity Test</td>
<td>Notify Administrator 30 days prior</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.9(g)</td>
<td>Additional Notifications when Using CMS</td>
<td>Notification of performance evaluation; notification about use of COMS data; notification that exceeded criterion for relative accuracy alternative</td>
<td>Yes, however, there are no opacity standards.</td>
</tr>
<tr>
<td>§ 63.9(h)(1)-(6)</td>
<td>Notification of Compliance Status</td>
<td>Contents due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after; when to submit to Federal vs. State authority</td>
<td>Yes, however, there are no opacity standards.</td>
</tr>
<tr>
<td>§ 63.9(i)</td>
<td>Adjustment of Submittal Deadlines</td>
<td>Procedures for Administrator to approve change when notifications must be submitted</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.9(j)</td>
<td>Change in Previous Information</td>
<td>Must submit within 15 days after the change</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(a)</td>
<td>Recordkeeping/Reporting</td>
<td>Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(b)(1)</td>
<td>Recordkeeping/Reporting</td>
<td>General requirements; keep all records readily available; keep for 5 years</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(i)</td>
<td>Records related to SSM</td>
<td>Recordkeeping of occurrence and duration of startups and shutdowns</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(ii)</td>
<td>Records related to SSM</td>
<td>Recordkeeping of malfunctions</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(iii)</td>
<td>Maintenance records</td>
<td>Recordkeeping of maintenance on air pollution control and monitoring equipment</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(iv)</td>
<td>Records Related to SSM</td>
<td>Actions taken to minimize emissions during SSM</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(v)</td>
<td>Records Related to SSM</td>
<td>Actions taken to minimize emissions during SSM</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(vi)-(xix)</td>
<td>CMS Records</td>
<td>Malfunctions, inoperative, out-of-control periods</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(xii)</td>
<td>Records</td>
<td>Records when under waiver</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(xiii)</td>
<td>Records</td>
<td>Records when using alternative to relative accuracy test</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(xiv)</td>
<td>Records</td>
<td>All documentation supporting Initial Notification and Notification of Compliance Status</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(b)(3)</td>
<td>Records</td>
<td>Applicability determinations</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(c)</td>
<td>Records</td>
<td>Additional records for CMS</td>
<td>No.</td>
</tr>
<tr>
<td>Citation</td>
<td>Subject</td>
<td>Brief description</td>
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</tr>
<tr>
<td>§ 63.10(d)(1)</td>
<td>General Reporting Requirements</td>
<td>Requirement to report</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(d)(2)</td>
<td>Report of Performance Test Results</td>
<td>When to submit to Federal or State authority</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(d)(3)</td>
<td>Reporting Opacity or VE Observations</td>
<td>What to report and when</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(d)(4)</td>
<td>Progress Reports</td>
<td>Must submit progress reports on schedule if under compliance extension</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(d)(5)</td>
<td>SSM Reports</td>
<td>Contents and submission</td>
<td>No. See § 63.11126(b) for malfunction reporting requirements.</td>
</tr>
<tr>
<td>§ 63.10(e)(1)-(2)</td>
<td>Additional CMS Reports</td>
<td>Must report results for each CEMS on a unit; written copy of CMS performance evaluation; two-three copies of COMS performance evaluation</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(e)(3)(i)-(iii)</td>
<td>Reports</td>
<td>Schedule for reporting excess emissions</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(e)(3)(iv)-(v)</td>
<td>Excess Emissions Reports</td>
<td>Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§ 63.8(c)(7)-(8) and 63.10(c)(5)-(13)</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(e)(3)(iv)-(v)</td>
<td>Excess Emissions Reports</td>
<td>Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§ 63.8(c)(7)-(8) and 63.10(c)(5)-(13)</td>
<td>No, § 63.11130(K) specifies excess emission events for this subpart.</td>
</tr>
<tr>
<td>§ 63.10(e)(3)(vi)-(viii)</td>
<td>Excess Emissions Report and Summary Report</td>
<td>Requirements for reporting excess emissions for CMS; requires all of the information in §§ 63.10(c)(5)-(13) and 63.8(c)(7)-(8)</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(e)(4)</td>
<td>Reporting COMS Data</td>
<td>Must submit COMS data with performance test data</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(f)</td>
<td>Waiver for Recordkeeping/Reporting</td>
<td>Procedures for Administrator to waive</td>
<td>Yes.</td>
</tr>
<tr>
<td>Citation</td>
<td>Subject</td>
<td>Brief description</td>
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<tr>
<td>§ 63.11(b)</td>
<td>Flares</td>
<td>Requirements for flares</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.12</td>
<td>Delegation</td>
<td>State authority to enforce standards</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.13</td>
<td>Addresses</td>
<td>Addresses where reports, notifications, and requests are sent</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.14</td>
<td>Incorporations by Reference</td>
<td>Test methods incorporated by reference</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.15</td>
<td>Availability of Information</td>
<td>Public and confidential information</td>
<td>Yes.</td>
</tr>
</tbody>
</table>

Applicability and Compliance Dates

§ 63.11504 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate a plating and polishing facility that is an area source of hazardous air pollutant (HAP) emissions and meets the criteria specified in paragraphs (a)(1) through (3) of this section.

(1) A plating and polishing facility is a plant site that is engaged in one or more of the processes listed in paragraphs (a)(1)(i) through (vi) of this section.

(i) Electroplating other than chromium electroplating (i.e., non-chromium electroplating).

(ii) Electroless or non-electrolytic plating.

(iii) Other non-electrolytic metal coating processes, such as chromate conversion coating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating; and thermal spraying.

(iv) Dry mechanical polishing of finished metals and formed products after plating or thermal spraying.

(v) Electroforming.

(vi) Electropolishing.

(2) A plating or polishing facility is an area source of HAP emissions, where an area source is any stationary source or group of stationary sources within a contiguous area under common control that does not have the potential to emit any single HAP at a rate of 9.07 megagrams per year (Mg/yr) (10 tons per year (tpy)) or more and any combination of HAP at a rate of 22.68 Mg/yr (25 tpy) or more.

(3) Your plating and polishing facility uses or has emissions of compounds of one or more plating and polishing metal HAP, which means any compound of any of the following metals: cadmium, chromium, lead, manganese, and nickel, as defined in § 63.11511, “What definitions apply to this subpart?” With the exception of lead, plating and polishing metal HAP also include any of these metals in the elemental form.

(b) [Reserved]

[73 FR 37741, July 1, 2008, as amended at 76 FR 57919, Sept. 19, 2011]
§ 63.11505 What parts of my plant does this subpart cover?

(a) This subpart applies to each new or existing affected source, as specified in paragraphs (a)(1) through (3) of this section, at all times. A new source is defined in § 63.11511, “What definitions apply to this subpart?”

(1) Each tank that contains one or more of the plating and polishing metal HAP, as defined in § 63.11511, “What definitions apply to this subpart?”, and is used for non-chromium electroplating; electroforming; electropolishing; electrophoresis or other non-electrolytic metal coating operations, such as chromate conversion coating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating.

(2) Each thermal spraying operation that applies one or more of the plating and polishing metal HAP, as defined in § 63.11511, “What definitions apply to this subpart?”

(3) Each dry mechanical polishing operation that emits one or more of the plating and polishing metal HAP, as defined in § 63.11511, “What definitions apply to this subpart?”

(b) An affected source is existing if you commenced construction or reconstruction of the affected source on or before March 14, 2008.

(c) An affected source is new if you commenced construction or reconstruction of the affected source after March 14, 2008.

(d) This subpart does not apply to any of the process units or operations described in paragraphs (d)(1) through (6) of this section.

(1) Process units that are subject to the requirements of 40 CFR part 63, subpart N (National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks).

(2) Research and development process units, as defined in § 63.11511, “What definitions apply to this subpart?”

(3) Process units that are used strictly for educational purposes.

(4) Plating, polishing, coating, or thermal spraying conducted to repair surfaces or equipment.

(5) Dry mechanical polishing conducted to restore the original finish to a surface.

(6) Any plating or polishing process that uses process materials that contain cadmium, chromium, lead, or nickel (as the metal) in amounts less than 0.1 percent by weight, or that contain manganese in amounts less than 1.0 percent by weight (as the metal), as used. Information used to determine the amount of plating and polishing metal HAP in materials used in the plating or polishing process may include information reported on the Material Safety Data Sheet for the material, but is not required. For plating or polishing tanks, the HAP content may be determined from the final bath contents “as used” to plate or to polish.

(e) You are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, “Title V,” provided you are not otherwise 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 applicable to area sources.

[73 FR 37741, July 1, 2008, as amended at 76 FR 57919, Sept. 19, 2011]

§ 63.11506 What are my compliance dates?

(a) If you own or operate an existing affected source, you must achieve compliance with the applicable provisions of this subpart no later than July 1, 2010.
(b) If you own or operate a new affected source for which the initial startup date is on or before July 1, 2008, you must achieve compliance with the provisions of this subpart no later than July 1, 2008.

(c) If you own or operate a new affected source for which the initial startup date is after July 1, 2008, you must achieve compliance with the provisions of this subpart upon initial startup of your affected source.

Standards and Compliance Requirements

§ 63.11507 What are my standards and management practices?

(a) If you own or operate an affected new or existing non-cyanide electroplating, electroforming, or electropolishing tank (hereafter referred to as an “electrolytic” process tank, as defined in § 63.11511, “What definitions apply to this subpart?”) that contains one or more of the plating and polishing metal HAP and operates at a pH of less than 12, you must comply with the requirements in paragraph (a)(1), (2), or (3) of this section, and implement the applicable management practices in paragraph (g) of this section, as practicable.

(1) You must use a wetting agent/fume suppressant in the bath of the affected tank, as defined in § 63.11511, “What definitions apply to this subpart?” and according to paragraphs (a)(1)(i) through (iii) of this section.

(i) You must initially add the wetting agent/fume suppressant in the amounts recommended by the manufacturer for the specific type of electrolytic process.

(ii) You must add wetting agent/fume suppressant in proportion to the other bath chemistry ingredients that are added to replenish the bath, as in the original make-up of the bath, or in proportions such that the bath contents are returned to that of the original make-up of the bath.

(iii) If a wetting agent/fume suppressant is included in the electrolytic process bath chemicals used in the affected tank according to the manufacturer's instructions, it is not necessary to add additional wetting agent/fume suppressants to the tank to comply with this rule.

(2) You must capture and exhaust emissions from the affected tank to any one of the following emission control devices: composite mesh pad, packed bed scrubber, or mesh pad mist eliminator, according to paragraphs (a)(2)(i) and (ii) of this section.

(i) You must operate all capture and control devices according to the manufacturer's specifications and operating instructions.

(ii) You must keep the manufacturer's specifications and operating instructions at the facility at all times in a location where they can be easily accessed by the operators.

(3) You must cover the tank surface according to paragraph (a)(3)(i) or (ii) of this section.

(i) For batch electrolytic process tanks, as defined in § 63.11511, “What definitions apply to this subpart?”, you must use a tank cover, as defined in § 63.11511, over all of the effective surface area of the tank for at least 95 percent of the electrolytic process operating time.

(ii) For continuous electrolytic process tanks, as defined in § 63.11511, “What definitions apply to this subpart?”, you must cover at least 75 percent of the surface of the tank, as defined in § 63.11511, whenever the electrolytic process tank is in operation.

(b) If you own or operate an affected new or existing “flash” or short-term electroplating tank, as defined in § 63.11511, “What definitions apply to this subpart?”, that uses or emits one or more of the plating and polishing metal HAP, you must comply with the requirements specified in paragraph (b)(1) or (b)(2), and implement the applicable management practices in paragraph (g) of this section, as practicable.
(1) You must limit short-term or “flash” electroplating to no more than 1 cumulative hour per day or 3 cumulative minutes per hour of plating time.

(2) You must use a tank cover, as defined in § 63.11511, “What definitions apply to this subpart?”, for at least 95 percent of the plating time.

(c) If you own or operate an affected new or existing process tank that is used both for short-term electroplating and for electrolytic processing of longer duration (i.e., processing that does not meet the definition of short-term or flash electroplating) and contains one or more of the plating and polishing metal HAP, you must meet the requirements specified in paragraph (a) or (b) of this section, whichever apply to the process operation, and implement the applicable management practices in paragraph (g) of this section, as practicable.

(d) If you own or operate an affected new or existing electroplating tank that uses cyanide in the plating bath, operates at pH greater than or equal to 12, and contains one or more of the plating and polishing metal HAP, you must comply with the requirements in paragraphs (d)(1) and (2) of this section:

(1) You must measure and record the pH of the bath upon startup of the bath, as defined in § 63.11511, “What definitions apply to this subpart?” No additional pH measurements are required.

(2) You must implement the applicable management practices in paragraph (g) of this section, as practicable.

(e) If you own or operate an affected new or existing dry mechanical polishing machine that emits one or more of the plating and polishing metal HAP, you must operate a capture system that captures particulate matter (PM) emissions from the dry mechanical polishing process and transports the emissions to a cartridge, fabric, or high efficiency particulate air (HEPA) filter, according to paragraphs (e)(1) and (2) of this section.

(1) You must operate all capture and control devices according to the manufacturer's specifications and operating instructions.

(2) You must keep the manufacturer's specifications and operating instructions at the facility at all times in a location where they can be easily accessed by the operators.

(f) If you own or operate an affected thermal spraying operation that applies one or more of the plating and polishing metal HAP, you must meet the applicable requirements specified in paragraphs (f)(1) through (3) of this section, and the applicable management practices in paragraph (g) of this section.

(1) For existing permanent thermal spraying operations, you must operate a capture system that collects PM emissions from the thermal spraying process and transports the emissions to a water curtain, fabric filter, cartridge, or HEPA filter, according to paragraphs (f)(1)(i) and (ii) of this section.

(2) For new permanent thermal spraying operations, you must operate a capture system that collects PM emissions from the thermal spraying process and transports the emissions to a fabric, cartridge, or HEPA filter, according to paragraphs (f)(2)(i) and (ii) of this section.

(3) For temporary thermal spraying operations, as defined in § 63.11511 “What definitions apply to this subpart?”, you must meet the applicable requirements specified in paragraphs (f)(3)(i) and (ii) of this section.

(i) You must document the amount of time the thermal spraying occurs each day, and where it is conducted.

(ii) You must implement the applicable management practices specified in paragraph (g) of this section, as practicable.

(g) If you own or operate an affected new or existing plating and polishing process unit that contains, applies, or emits one or more of the plating and polishing metal HAP, you must implement the applicable management practices in paragraphs (g)(1) through (12) of this section, as practicable.
(1) Minimize bath agitation when removing any parts processed in the tank, as practicable except when necessary to meet part quality requirements.

(2) Maximize the draining of bath solution back into the tank, as practicable, by extending drip time when removing parts from the tank; using drain boards (also known as drip shields); or withdrawing parts slowly from the tank, as practicable.

(3) Optimize the design of barrels, racks, and parts to minimize dragout of bath solution (such as by using slotted barrels and tilted racks, or by designing parts with flow-through holes to allow the tank solution to drip back into the tank), as practicable.

(4) Use tank covers, if already owned and available at the facility, whenever practicable.

(5) Minimize or reduce heating of process tanks, as practicable (e.g., when doing so would not interrupt production or adversely affect part quality).

(6) Perform regular repair, maintenance, and preventive maintenance of racks, barrels, and other equipment associated with affected sources, as practicable.

(7) Minimize bath contamination, such as through the prevention or quick recovery of dropped parts, use of distilled/de-ionized water, water filtration, pre-cleaning of parts to be plated, and thorough rinsing of pre-treated parts to be plated, as practicable.

(8) Maintain quality control of chemicals, and chemical and other bath ingredient concentrations in the tanks, as practicable.

(9) Perform general good housekeeping, such as regular sweeping or vacuuming, if needed, and periodic washdowns, as practicable.

(10) Minimize spills and overflow of tanks, as practicable.

(11) Use squeegee rolls in continuous or reel-to-reel plating tanks, as practicable.

(12) Perform regular inspections to identify leaks and other opportunities for pollution prevention.

[73 FR 37741, July 1, 2008, as amended at 76 FR 57920, Sept. 19, 2011]

§ 63.11508 What are my compliance requirements?

(a) If you own or operate an affected source, you must submit a Notification of Compliance Status in accordance with § 63.11509(b) of “What are my notification, reporting, and recordkeeping requirements?”

(b) You must be in compliance with the applicable management practices and equipment standards in this subpart at all times.

(c) To demonstrate initial compliance, you must satisfy the requirements specified in paragraphs (c)(1) through (11) of this section.

(1) If you own or operate an affected electroplating, electroforming, or electropolishing tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(a), “What are my standards and management practices?”, and you use a wetting agent/fume suppressant to comply with this subpart, you must demonstrate initial compliance according to paragraphs (c)(1)(i) through (iv) of this section.

(i) You must add wetting agent/fume suppressant to the bath of each affected tank according to manufacturer's specifications and instructions.
(ii) You must state in your Notification of Compliance Status that you add wetting agent/fume suppressant to the bath according to manufacturer’s specifications and instructions.

(iii) You must implement the applicable management practices specified in § 63.11507(g), “What are my standards and management practices?”, as practicable.

(iv) You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in § 63.11507(g), “What are my standards and management practices?”, as practicable.

(2) If you own or operate an affected electroplating, electroforming, or electropolishing tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(a), “What are my standards and management practices?” and you use a control system, as defined in § 63.11511, “What definitions apply to this subpart?” to comply with this subpart, you must demonstrate initial compliance according to paragraphs (c)(2)(i) through (v) of this section.

(i) You must install a control system designed to capture emissions from the affected tank and exhaust them to a composite mesh pad, packed bed scrubber, or mesh pad mist eliminator.

(ii) You must state in your Notification of Compliance Status that you have installed the control system according to the manufacturer’s specifications and instructions.

(iii) You must implement the applicable management practices specified in § 63.11507(g), “What are my standards and management practices?”, as practicable.

(iv) You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in § 63.11507(g), “What are my standards and management practices?”, as practicable.

(v) You must follow the manufacturer’s specifications and operating instructions for the control systems at all times.

(3) If you own or operate an affected batch electrolytic process tank, as defined in § 63.11511, “What definitions apply to this subpart?” that contains one or more of the plating and polishing metal HAP and which is subject to the requirements in § 63.11507(a), “What are my standards and management practices?” and you use a tank cover, as defined in § 63.11511, to comply with § 11507(a), (b) or (c) of this subpart, you must demonstrate initial compliance according to paragraphs (c)(3)(i) through (iv) of this section.

(i) You must install a tank cover on the affected tank.

(ii) You must state in your Notification of Compliance Status that you operate the tank with the cover in place at least 95 percent of the electrolytic process operating time.

(iii) You must implement the applicable management practices specified in § 63.11507(g), “What are my standards and management practices?”, as practicable.

(iv) You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in § 63.11507(g), “What are my standards and management practices?”, as practicable.

(4) If you own or operate an affected continuous electrolytic process tank, as defined in § 63.11511, “What definitions apply to this subpart?” that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(a), “What are my standards and management practices?” and you cover the tank surface to comply with § 11507(a), (b) or (c) of this subpart, you must demonstrate initial compliance according to paragraphs (c)(4)(i) through (iv) of this section.

(i) You must cover at least 75 percent of the surface area of the affected tank.

(ii) You must state in your Notification of Compliance Status that you operate the tank with the surface cover in place whenever the continuous electrolytic process is in operation.
(iii) You must implement the applicable management practices specified in § 63.11507(g), “What are my standards and management practices?”, as practicable.

(iv) You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in § 63.11507(g), “What are my standards and management practices?”, as practicable.

(5) If you own or operate an affected flash or short-term electroplating tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(b), “What are my standards and management practices?” and you comply with § 11507(a), (b) or (c) of this subpart by limiting the plating time of the affected tank, you must demonstrate initial compliance according to paragraphs (c)(5)(i) through (iii) of this section.

(i) You must state in your Notification of Compliance Status that you limit short-term or flash electroplating to no more than 1 cumulative hour per day, or 3 cumulative minutes per hour of plating time.

(ii) You must implement the applicable management practices specified in § 63.11507(g), “What are my standards and management practices?”, as practicable.

(iii) You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in § 63.11507(g), “What are my standards and management practices?”, as practicable.

(6) If you own or operate an affected flash or short-term electroplating tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(b), “What are my standards and management practices?” and you comply with § 11507(a), (b) or (c) of this subpart by operating the affected tank with a cover, you must demonstrate initial compliance according to paragraphs (c)(6)(i) through (iv) of this section.

(i) You must install a tank cover on the affected tank.

(ii) You must state in your Notification of Compliance Status that you operate the tank with the cover in place at least 95 percent of the plating time.

(iii) You must implement the applicable management practices specified in § 63.11507(g), “What are my standards and management practices?”, as practicable.

(iv) You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in § 63.11507(g), “What are my standards and management practices?”, as practicable.

(7) If you own or operate an affected tank that contains one or more of the plating and polishing metal HAP, uses cyanide in the bath, and is subject to the management practices specified in § 63.11507(d), “What are my standards and management practices?”, you must demonstrate initial compliance according to paragraphs (c)(7)(i) through (iii) of this section.

(i) You must report in your Notification of Compliance Status the pH of the bath solution that was measured at startup, as defined in § 63.11511, according to the requirements of § 63.11507(d)(1).

(ii) You must implement the applicable management practices specified in § 63.11507(g), “What are my standards and management practices?”, as practicable.

(iii) You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in § 63.11490(g), “What are my standards and management practices?”, as practicable.

(8) If you own or operate an affected dry mechanical polishing operation that emits one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(e), “What are my standards and management practices?”, you must demonstrate initial compliance according to paragraphs (c)(8)(i) through (iii) of this section.

(i) You must install a control system that is designed to capture PM emissions from the polishing operation and exhaust them to a cartridge, fabric, or HEPA filter.
(ii) You must state in your Notification of Compliance Status that you have installed the control system according to the manufacturer's specifications and instructions.

(iii) You must keep the manufacturer's operating instructions at the facility at all times in a location where they can be easily accessed by the operators.

(9) If you own or operate an existing affected permanent thermal spraying operation that applies one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(f)(1), “What are my standards and management practices?”, you must demonstrate initial compliance according to paragraphs (c)(9)(i) through (iii) of this section.

(i) You must install a control system that is designed to capture PM emissions from the thermal spraying operation and exhaust them to a water curtain, or a cartridge, fabric, or HEPA filter.

(ii) You must state in your Notification of Compliance Status that you have installed and are operating the control system according to the manufacturer's specifications and instructions.

(iii) You must keep the manufacturer's operating instructions at the facility at all times in a location where they can be easily accessed by the operators.

(10) If you own or operate a new affected permanent thermal spraying operation that applies one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(f)(2), “What are my standards and management practices?”, you must demonstrate initial compliance according to paragraphs (c)(10)(i) through (iii) of this section.

(i) You must install and operate a control system that is designed to capture PM emissions from the thermal spraying operation and exhaust them to a cartridge, fabric, or HEPA filter.

(ii) You must state in your Notification of Compliance Status that you have installed and operate the control system according to the manufacturer's specifications and instructions.

(iii) You must keep the manufacturer's operating instructions at the facility at all times in a location where they can be easily accessed by the operators.

(11) If you own or operate an affected temporary thermal spraying operation that applies one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(f)(3), “What are my standards and management practices?”, you must demonstrate initial compliance according to paragraphs (c)(11)(i) and (ii) of this section.

(i) You must implement the applicable management practices specified in § 63.11507(g), “What are my standards and management practices?”, as practicable.

(ii) You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in § 63.11507(g), “What are my standards and management practices?”, as practicable.

(d) To demonstrate continuous compliance with the applicable management practices and equipment standards specified in this subpart, you must satisfy the requirements specified in paragraphs (d)(1) through (8) of this section.

(1) You must always operate and maintain your affected source, including air pollution control equipment.

(2) You must prepare an annual compliance certification according to the requirements specified in § 63.11509(c), “Notification, Reporting, and Recordkeeping,” and keep it in a readily-accessible location for inspector review.

(3) If you own or operate an affected electroplating, electroforming, or electropolishing tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(a), “What are my standards
and management practices?", and you use a wetting agent/fume suppressant to comply with this subpart, you must demonstrate continuous compliance according to paragraphs (d)(3)(i) through (iii) of this section.

(i) You must record that you have added the wetting agent/fume suppressant to the tank bath in the original make-up of the tank.

(ii) For tanks where the wetting agent/fume suppressant is a separate ingredient from the other tank additives, you must demonstrate continuous compliance according to paragraphs (d)(3)(ii) (A) and (B) this section.

(A) You must add wetting agent/fume suppressant in proportion to the other bath chemistry ingredients that are added to replenish the tank bath, as in the original make-up of the tank; or in proportion such that the bath is brought back to the original make-up of the tank.

(B) You must record each addition of wetting agent/fume suppressant to the tank bath.

(iii) You must state in your annual compliance certification that you have added wetting agent/fume suppressant to the bath according to the manufacturer's specifications and instructions.

(4) If you own or operate an affected electroplating, electroforming, or electropolishing tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(a), "What are my standards and management practices?", and you use a control system to comply with this subpart; an affected dry mechanical polishing operation that is subject to § 63.11507(e); or an affected thermal spraying operation that is subject to § 63.11507(f)(1) or (2), you must demonstrate continuous compliance according to paragraphs (d)(4)(i) through (v) of this section.

(i) You must operate and maintain the control system according to the manufacturer's specifications and instructions.

(ii) Following any malfunction or failure of the capture or control devices to operate properly, you must take immediate corrective action to return the equipment to normal operation according to the manufacturer's specifications and operating instructions.

(iii) You must state in your annual certification that you have operated and maintained the control system according to the manufacturer's specifications and instructions.

(iv) You must record the results of all control system inspections, deviations from proper operation, and any corrective action taken.

(v) You must keep the manufacturer's operating instructions at the facility at all times in a location where they can be easily accessed by the operators.

(5) If you own or operate an affected flash or short-term electroplating tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(b), "What are my standards and management practices?" and you comply with § 11507(a), (b) or (c) of this subpart by limiting the plating time for the affected tank, you must demonstrate continuous compliance according to paragraphs (d)(5)(i) through (iii) of this section.

(i) You must limit short-term or flash electroplating to no more than 1 cumulative hour per day or 3 cumulative minutes per hour of plating time.

(ii) You must record the times that the affected tank is operated each day.

(iii) You must state in your annual compliance certification that you have limited short-term or flash electroplating to no more than 1 cumulative hour per day or 3 cumulative minutes per hour of plating time.

(6) If you own or operate an affected batch electrolytic process tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements of § 63.11507(a), "What are my standards and management
practices?” or a flash or short-term electroplating tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(b), and you comply with § 11507(a), (b) or (c) of this section by operating the affected tank with a cover, you must demonstrate continuous compliance according to paragraphs (d)(6)(i) through (iii) of this section.

(i) You must operate the tank with the cover in place at least 95 percent of the electrolytic process operating time.

(ii) You must record the times that the tank is operated and the times that the tank is covered on a daily basis.

(iii) You must state in your annual certification that you have operated the tank with the cover in place at least 95 percent of the electrolytic process time.

(7) If you own or operate an affected continuous electrolytic process tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(a), “What are my standards and management practices?” and you comply with § 11507(a), (b) or (c) of this subpart by operating the affected tank with a cover, you must demonstrate continuous compliance according to paragraphs (d)(7)(i) and (ii) of this section.

(i) You must operate the tank with at least 75 percent of the surface covered during all periods of electrolytic process operation.

(ii) You must state in your annual certification that you have operated the tank with 75 percent of the surface covered during all periods of electrolytic process operation.

(8) If you own or operate an affected tank or other operation that is subject to the management practices specified in § 63.11507(g), “What are my standards and management practices?”, you must demonstrate continuous compliance according to paragraphs (d)(8)(i) and (ii) of this section.

(i) You must implement the applicable management practices during all times that the affected tank or process is in operation.

(ii) You must state in your annual compliance certification that you have implemented the applicable management practices, as practicable.

[73 FR 37741, July 1, 2008, as amended at 76 FR 57920, Sept. 19, 2011]

§ 63.11509 What are my notification, reporting, and recordkeeping requirements?

(a) If you own or operate an affected source, as defined in § 63.11505(a), “What parts of my plant does this subpart cover?”, you must submit an Initial Notification in accordance with paragraphs (a)(1) through (4) of this section by the dates specified.

(1) The Initial Notification must include the information specified in § 63.9(b)(2)(i) through (iv) of the General Provisions of this part.

(2) The Initial Notification must include a description of the compliance method (e.g., use of wetting agent/fume suppressant) for each affected source.

(3) If you start up your affected source on or before July 1, 2008, you must submit an Initial Notification not later than 120 calendar days after July 1, 2008.

(4) If you startup your new affected source after July 1, 2008, you must submit an Initial Notification when you become subject to this subpart.

(b) If you own or operate an affected source, you must submit a Notification of Compliance Status in accordance with paragraphs (b)(1) through (3) of this section.
(1) The Notification of Compliance Status must be submitted before the close of business on the compliance date specified in § 63.11506, “What are my compliance dates?”

(2) The Notification of Compliance Status must include the items specified in paragraphs (b)(2)(i) through (iv) of this section.

(i) List of affected sources and the plating and polishing metal HAP used in, or emitted by, those sources.

(ii) Methods used to comply with the applicable management practices and equipment standards.

(iii) Description of the capture and emission control systems used to comply with the applicable equipment standards.

(iv) Statement by the owner or operator of the affected source as to whether the source is in compliance with the applicable standards or other requirements.

(3) If a facility makes a change to any items in (b)(2)(i), iii, and (iv) of this section that does not result in a deviation, an amended Notification of Compliance Status should be submitted within 30 days of the change.

(c) If you own or operate an affected source, you must prepare an annual certification of compliance report according to paragraphs (c)(1) through (7) of this section. These reports do not need to be submitted unless a deviation from the requirements of this subpart has occurred during the reporting year, in which case, the annual compliance report must be submitted along with the deviation report.

(1) If you own or operate an affected electroplating, electroforming, or electropolishing tank that is subject to the requirements in § 63.11507(a)(1), “What are my standards and management practices?”, you must state in your annual compliance certification that you have added wetting agent/fume suppressant to the bath according to the manufacturer’s specifications and instructions.

(2) If you own or operate any one of the affected sources listed in paragraphs (c)(2)(i) through (iii) of this section, you must state in your annual certification that you have operated and maintained the control system according to the manufacturer’s specifications and instructions.

(i) Electroplating, electroforming, or electropolishing tank that is subject to the requirements in § 63.11507(a), “What are my standards and management practices?”, and you use a control system to comply with this subpart;

(ii) Dry mechanical polishing operation that is subject to § 63.11507(e); or

(iii) Permanent thermal spraying operation that is subject to § 63.11507(f)(1) or (2).

(3) If you own or operate an affected flash or short-term electroplating tank that is subject to the requirements in § 63.11507(b), “What are my standards and management practices?” and you comply with § 11507(a), (b) or (c) of this subpart by limiting the plating time of the affected tank, you must state in your annual compliance certification that you have limited short-term or flash electroplating to no more than 1 cumulative hour per day or 3 cumulative minutes per hour of plating time.

(4) If you own or operate an affected batch electrolytic process tank that is subject to the requirements of § 63.11507(a) or a flash or short-term electroplating tank that is subject to the requirements in § 63.11507(b), “What are my standards and management practices?” and you comply with § 11507(a), (b) or (c) of this subpart by operating the affected tank with a cover, you must state in your annual certification that you have operated the tank with the cover in place at least 95 percent of the electrolytic process time.

(5) If you own or operate an affected continuous electrolytic process tank that is subject to the requirements of § 63.11507(a), “What are my standards and management practices?” and you comply with § 11507(a), (b) or (c) of this subpart by operating the affected tank with a cover, you must state in your annual certification that you have covered at least 75 percent of the surface area of the tank during all periods of electrolytic process operation.
(6) If you own or operate an affected tank or other affected plating and polishing operation that is subject to the management practices specified in § 63.11507(g), “What are my standards and management practices?” you must state in your annual compliance certification that you have implemented the applicable management practices, as practicable.

(7) Each annual compliance report must be prepared no later than January 31 of the year immediately following the reporting period and kept in a readily-accessible location for inspector review. If a deviation has occurred during the year, each annual compliance report must be submitted along with the deviation report, and postmarked or delivered no later than January 31 of the year immediately following the reporting period.

(d) If you own or operate an affected source, and any deviations from the compliance requirements specified in this subpart occurred during the year, you must report the deviations, along with the corrective action taken, and submit this report to the delegated authority.

(e) You must keep the records specified in paragraphs (e)(1) through (3) of this section.

(1) A copy of any Initial Notification and Notification of Compliance Status that you submitted and all documentation supporting those notifications.

(2) The records specified in § 63.10(b)(2)(ii) through (iii) and (xiv) of the General Provisions of this part.

(3) The records required to show continuous compliance with each management practice and equipment standard that applies to you, as specified in § 63.11508(d), “What are my compliance requirements?”

(f) You must keep each record for a minimum of 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. You must keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1) of the General Provisions to part 63. You may keep the records offsite for the remaining 3 years.

[73 FR 37741, July 1, 2008, as amended at 76 FR 57920, Sept. 19, 2011]

Other Requirements and Information

§ 63.11510 What General Provisions apply to this subpart?

If you own or operate a new or existing affected source, you must comply with the requirements of the General Provisions (40 CFR part 63, subpart A) according to Table 1 of this subpart.

§ 63.11511 What definitions apply to this subpart?

Terms used in this subpart are defined in this section.

Batch electrolytic process tank means a tank used for an electrolytic process in which a part or group of parts, typically mounted on racks or placed in barrels, is placed in the tank and immersed in an electrolytic process solution as a single unit (i.e., as a batch) for a predetermined period of time, during which none of the parts are removed from the tank and no other parts are added to the tank, and after which the part or parts are removed from the tank as a unit.

Bath means the liquid contents of a tank, as defined in this section, which is used for electroplating, electroforming, electropolishing, or other metal coating processes at a plating and polishing facility.

Bench-scale means any operation that is small enough to be performed on a bench, table, or similar structure so that the equipment is not directly contacting the floor.

Capture system means the collection of components used to capture gases and fumes released from one or more emissions points and then convey the captured gas stream to a control device, as part of a complete control system.
A capture system may include, but is not limited to, the following components as applicable to a given capture system design: duct intake devices, hoods, enclosures, ductwork, dampers, manifolds, plenums, and fans.

*Cartridge filter* means a type of control device that uses perforated metal cartridges containing a pleated paper or non-woven fibrous filter media to remove PM from a gas stream by sieving and other mechanisms. Cartridge filters can be designed with single use cartridges, which are removed and disposed after reaching capacity, or continuous use cartridges, which typically are cleaned by means of a pulse-jet mechanism.

*Composite mesh pad* means a type of control device similar to a mesh pad mist eliminator except that the device is designed with multiple pads in series that are woven with layers of material with varying fiber diameters, which produce a coalescing effect on the droplets or PM that impinge upon the pads.

*Continuous electrolytic process tank* means a tank that uses an electrolytic process and in which a continuous metal strip or other type of continuous substrate is fed into and removed from the tank continuously. This process is also called reel-to-reel electrolytic plating.

*Control device* means equipment that is part of a control system that collects and/or reduces the quantity of a pollutant that is emitted to the air. The control device receives emissions that are transported from the process by the capture system.

*Control system* means the combination of a capture system and a control device. The capture system is designed to collect and transport air emissions from the affected source to the control device. The overall control efficiency of any control system is a combination of the ability of the system to capture the air emissions (i.e., the capture efficiency) and the control device efficiency. Consequently, it is important to achieve good capture to ensure good overall control efficiency. Capture devices that are known to provide high capture efficiencies include hoods, enclosures, or any other duct intake devices with ductwork, dampers, manifolds, plenums, or fans.

*Conversion coatings* are coatings that form a hard metal finish on an object when the object is submerged in a tank bath or solution that contains the conversion coatings. Conversion coatings for the purposes of this rule include coatings composed of chromium, as well as the other plating and polishing metal HAP, where no electrical current is used.

*Cyanide plating* means plating processes performed in tanks that use cyanide as a major bath ingredient and that operate at pH of 12 or more, and use or emit any of the plating and polishing metal HAP, as defined in this section. Electroplating and electroforming are performed with or without cyanide. The cyanide in the bath works to dissolve the HAP metal added as a cyanide compound (e.g., cadmium cyanide) and creates free cyanide in solution, which helps to corrode the anode. These tanks are self-regulating to a pH of 12 due to the caustic nature of the cyanide bath chemistry. The cyanide in the bath is a major bath constituent and not an additive; however, the self-regulating chemistry of the bath causes the bath to act as if wetting agents/fume suppressants are being used and to ensure an optimum plating process. All cyanide plating baths at pH greater than or equal to 12 have cyanide-metal complexes in solution. The metal HAP to be plated is not emitted because it is either bound in the metal-cyanide complex or reduced at the cathode to elemental metal, and plated onto the immersed parts. Cyanide baths are not intentionally operated at pH less 12 since unfavorable plating conditions would occur in the tank, among other negative effects.

*Deviation* means any instance in which an affected source or an owner or operator of such an affected source:

1. Fails to meet any requirement or obligation established by this rule including, but not limited to, any equipment standard (including emissions and operating limits), management practice, or operation and maintenance requirement;

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

3. Fails to meet any equipment standard (including emission and operating limits), management standard, or operation and maintenance requirement in this rule during startup, shutdown, or malfunction.

*Dry mechanical polishing* means a process used for removing defects from and smoothing the surface of finished metals and formed products after plating or thermal spraying with any of the plating and polishing metal HAP, as
defined in this section, using automatic or manually-operated machines that have hard-faced abrasive wheels or belts and where no liquids or fluids are used to trap the removed metal particles. The affected process does not include polishing with use of pastes, liquids, lubricants, or any other added materials.

**Electroforming** means an electrolytic process using or emitting any of the plating and polishing metal HAP, as defined in this section, that is used for fabricating metal parts. This process is essentially the same as electroplating except that the plated substrate (mandrel) is removed, leaving only the metal plate. In electroforming, the metal plate is self-supporting and generally thicker than in electroplating.

**Electroless plating** means a non-electrolytic process that uses or emits any of the plating and polishing metal HAP, as defined in this section, in which metallic ions in a plating bath or solution are reduced to form a metal coating at the surface of a catalytic substrate without the use of external electrical energy. Electroless plating is also called non-electrolytic plating. Examples include, but are not limited to, chromate conversion coating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating.

**Electroless plating processes** means electroplating and electroforming that use or emit any of the plating and polishing metal HAP, as defined in this section, where metallic ions in a plating bath or solution are reduced to form a metal coating on the surface of parts and products using electrical energy.

**Electroplating** means an electrolytic process that uses or emits any of the plating and polishing metal HAP, as defined in this section, in which metal ions in solution are reduced onto the surface of the work piece (the cathode) via an electrical current. The metal ions in the solution are usually replenished by the dissolution of metal from solid metal anodes fabricated of the same metal being plated, or by direct replenishment of the solution with metal salts or oxides; electroplating is also called electrolytic plating.

**Electropolishing** means an electrolytic process performed in a tank after plating that uses or emits any of the plating and polishing metal HAP, as defined in this section, in which a work piece is attached to an anode immersed in a bath, and the metal substrate is dissolved electrolytically, thereby removing the surface contaminant; electropolishing is also called electrolytic polishing. For the purposes of this subpart, electropolishing does not include bench-scale operations.

**Fabric filter** means a type of control device used for collecting PM by filtering a process exhaust stream through a filter or filter media. A fabric filter is also known as a baghouse.

**Filters**, for the purposes of this part, include cartridge, fabric, or HEPA filters, as defined in this section.

**Flash electroplating** means an electrolytic process performed in a tank that uses or emits any of the plating and polishing metal HAP, as defined in this section, and that is used no more than 3 cumulative minutes per hour or no more than 1 cumulative hour per day.

**General Provisions of this part (40 CFR part 63, subpart A)** means the section of the Code of Federal Regulations (CFR) that addresses air pollution rules that apply to all HAP sources addressed in part 63, which includes the National Emission Standards for Hazardous Air Pollutants (NESHAP).

**HAP** means hazardous air pollutant as defined from the list of 188 chemicals and compounds specified in the CAA Amendments of 1990; HAP are also called “air toxics.” The five plating and polishing metal HAP, as defined in this section, are on this list of 188 chemicals.

**High efficiency particulate air (HEPA) filter** means a type of control device that uses a filter composed of a mat of randomly arranged fibers and is designed to remove at least 99.97 percent of airborne particles that are 0.3 micrometers or larger in diameter.

**Maintenance** is any process at a plating and polishing facility that is performed to keep the process equipment or the facility operating properly and is not performed on items to be sold as products.

**Major facility for HAP** is any facility that emits greater than 10 tpy of any HAP, or that emits a combined total of all HAP of over 25 tpy, where the HAP used to determine the total facility emissions are not restricted to only plating and polishing metal HAP or from only plating and polishing operations.
Mesh pad mist eliminator means a type of control device, consisting of layers of interlocked filaments densely packed between two supporting grids that remove liquid droplets and PM from the gas stream through inertial impaction and direct interception.

Metal coating operation means any process performed either in a tank that contains liquids or as part of a thermal spraying operation, that applies one or more plating and polishing metal HAP, as defined in this section, to the surface of parts and products used in manufacturing. These processes include but are not limited to: non-chromium electroplating; electroforming; electropolishing; non-electrolytic metal coating processes, such as chromate conversion coating, electroless nickel plating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating; and thermal or flame spraying.

Metal HAP content of material used in plating and polishing is the HAP content as determined from an analysis or engineering estimate of the HAP contents of the tank bath or solution, in the case of plating, metal coating, or electropolishing; or the HAP content of the metal coating being applied in the case of thermal spraying. Safety data sheet (SDS) information may be used in lieu of testing or engineering estimates but is not required to be used.

New source means any affected source for which you commenced construction or reconstruction after March 14, 2008.

Non-cyanide electrolytic plating and electropolishing processes means electroplating, electroforming, and electropolishing that uses or emits any of the plating and polishing metal HAP, as defined in this section, performed without cyanide in the tank. These processes do not use cyanide in the tank and operate at pH values less than 12. These processes use electricity and add or remove metals such as metal HAP from parts and products used in manufacturing. Both electroplating and electroforming can be performed with cyanide as well.

Non-electrolytic plating means a process that uses or emits any of the plating and polishing metal HAP, as defined in this section, in which metallic ions in a plating bath or solution are reduced to form a metal coating at the surface of a catalytic substrate without the use of external electrical energy. Non-electrolytic plating is also called electroless plating. Examples include chromate conversion coating, nickel acetate sealing, electroless nickel plating, sodium dichromate sealing, and manganese phosphate coating.

Packed-bed scrubber means a type of control device that includes a single or double packed bed that contains packing media on which PM and droplets impinge and are removed from the gas stream. The packed-bed section of the scrubber is followed by a mist eliminator to remove any water entrained from the packed-bed section.

Plating and polishing facility means a facility engaged in one or more of the following processes that uses or emits any of the plating and polishing metal HAP, as defined in this section: electroplating processes other than chromium electroplating (i.e., non-chromium electroplating); electroless plating; other non-electrolytic metal coating processes performed in a tank, such as chromate conversion coating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating; thermal spraying; and the dry mechanical polishing of finished metals and formed products after plating or thermal spraying. Plating is performed in a tank or thermally sprayed so that a metal coating is irreversibly applied to an object. Plating and polishing does not include any bench-scale processes.

Plating and polishing metal HAP means any compound of any of the following metals: cadmium, chromium, lead, manganese, and nickel, or any of these metals in the elemental form, with the exception of lead. Any material that does not contain cadmium, chromium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight (as the metal), and does not contain manganese in amounts greater than or equal to 1.0 percent by weight (as the metal), as reported on the Material Safety Data Sheet for the material, is not considered to be a plating and polishing metal HAP.

Plating and polishing process tanks means any tank in which a process is performed at an affected plating and polishing facility that uses or has the potential to emit any of the plating and polishing metal HAP, as defined in this section. The processes performed in plating and polishing tanks include the following: electroplating processes other than chromium electroplating (i.e., non-chromium electroplating) performed in a tank; electroless plating; and non-electrolytic metal coating processes, such as chromate conversion coating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating; and electropolishing. This term does not include tanks containing solutions that are used to clean, rinse or wash parts prior to placing the parts in a plating and polishing process tank, or subsequent to removing the parts from a plating and polishing process tank. This term also does not include any bench-scale operations.
**PM** means solid or particulate matter that is emitted into the air.

*Repair* means any process used to return a finished object or tool back to its original function or shape.

*Research and development process unit* means any process unit that is used for conducting research and development for new processes and products and is not used to manufacture products for commercial sale, except in a *de minimis* manner.

*Short-term plating* means an electroplating process that uses or emits any of the plating and polishing metal HAP, as defined in this section, and that is used no more than 3 cumulative minutes per hour or 1 hour cumulative per day.

*Startup of the tank bath* is when the components or relative proportions of the various components in the bath have been altered from the most recent operating period. Startup of the bath does not include events where only the tank’s heating or agitation and other mechanical operations are turned back on after being turned off for a period of time.

*Tank cover* for batch process units means a solid structure made of an impervious material that is designed to cover the entire open surface of a tank or process unit that is used for plating or other metal coating processes.

*Tank cover* for continuous process units, means a solid structure or combination of structures, made of an impervious material that is designed to cover at least 75 percent of the open surface of the tank or process unit that is used for continuous plating or other continuous metal coating processes.

*Temporary thermal spraying* means a thermal spraying operation that uses or emits any of the plating and polishing metal HAP, as defined in this section, and that lasts no more than 1 hour in duration during any one day and is conducted in situ. Thermal spraying that is conducted in a dedicated thermal spray booth or structure is not considered to be temporary thermal spraying.

*Thermal spraying* (also referred to as metal spraying or flame spraying) is a process that uses or emits any of the plating and polishing metal HAP, as defined in this section, in which a metallic coating is applied by projecting heated, molten, or semi-molten metal particles onto a substrate. Commonly-used thermal spraying methods include high velocity oxy-fuel (HVOF) spraying, flame spraying, electric arc spraying, plasma arc spraying, and detonation gun spraying. This operation does not include spray painting at ambient temperatures.

*Water curtain* means a type of control device that draws the exhaust stream through a continuous curtain of moving water to scrub out suspended PM.

*Wetting agent/fume suppressant* means any chemical agent that reduces or suppresses fumes or mists from a plating and polishing tank by reducing the surface tension of the tank bath.

[73 FR 37741, July 1, 2008, as amended at 76 FR 57921, Sept. 19, 2011]

§ 63.11512  **Who implements and enforces this subpart?**

(a) This subpart can be implemented and enforced by EPA or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency, in addition to EPA, has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if implementation and enforcement of 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 EPA Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities that cannot be delegated to State, local, or tribal agencies are specified in paragraphs (c)(1) through (5) of this section.
(1) Approval of an alternative non-opacity emissions standard under 40 CFR 63.6(g), of the General Provisions of this part.

(2) Approval of an alternative opacity emissions standard under § 63.6(h)(9), of the General Provisions of this part.

(3) Approval of a major change to test methods under § 63.7(e)(2)(ii) and (f), of the General Provisions of this part. A “major change to test method” is defined in § 63.90.

(4) Approval of a major change to monitoring under § 63.8(f), of the General Provisions of this part. A “major change to monitoring” is defined in § 63.90.

(5) Approval of a major change to recordkeeping and reporting under § 63.10(f), of the General Provisions of this part. A “major change to recordkeeping/reporting” is defined in § 63.90.

§ 63.11513  [Reserved]

Table 1 to Subpart WWWW of Part 63—Applicability of General Provisions to Plating and Polishing Area Sources

As required in § 63.11510, “What General Provisions apply to this subpart?”, you must meet each requirement in the following table that applies to you.

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1 Section 63.11505(e), “What parts of my plant does this subpart cover?”, exempts affected sources from the obligation to obtain title V operating permits.

[73 FR 37741, July 1, 2008, as amended at 76 FR 57922, Sept. 19, 2011]
Introduction

§60.4300 What is the purpose of this subpart?

This subpart establishes emission standards and compliance schedules for the control of emissions from stationary combustion turbines that commenced construction, modification or reconstruction after February 18, 2005.

Applicability

§60.4305 Does this subpart apply to my stationary combustion turbine?

(a) If you are the owner or operator of a stationary combustion turbine with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18, 2005, your turbine is subject to this subpart. Only heat input to the combustion turbine should be included when determining whether or not this subpart is applicable to your turbine. Any additional heat input to associated heat recovery steam generators (HRSG) or duct burners should not be included when determining your peak heat input. However, this subpart does apply to emissions from any associated HRSG and duct burners.

(b) Stationary combustion turbines regulated under this subpart are exempt from the requirements of subpart GG of this part. Heat recovery steam generators and duct burners regulated under this subpart are exempted from the requirements of subparts Da, Db, and Dc of this part.

§60.4310 What types of operations are exempt from these standards of performance?

(a) Emergency combustion turbines, as defined in §60.4420(i), are exempt from the nitrogen oxides (NOx) emission limits in §60.4320.

(b) Stationary combustion turbines engaged by manufacturers in research and development of equipment for both combustion turbine emission control techniques and combustion turbine efficiency improvements are exempt from the NOx emission limits in §60.4320 on a case-by-case basis as determined by the Administrator.

(c) Stationary combustion turbines at integrated gasification combined cycle electric utility steam generating units that are subject to subpart Da of this part are exempt from this subpart.

(d) Combustion turbine test cells/stands are exempt from this subpart.
Emission Limits

§60.4315 What pollutants are regulated by this subpart?

The pollutants regulated by this subpart are nitrogen oxide (NOX) and sulfur dioxide (SO2).

§60.4320 What emission limits must I meet for nitrogen oxides (NOX)?

(a) You must meet the emission limits for NOX specified in Table 1 to this subpart.

(b) If you have two or more turbines that are connected to a single generator, each turbine must meet the emission limits for NOX.

§60.4325 What emission limits must I meet for NOX if my turbine burns both natural gas and distillate oil (or some other combination of fuels)?

You must meet the emission limits specified in Table 1 to this subpart. If your total heat input is greater than or equal to 50 percent natural gas, you must meet the corresponding limit for a natural gas-fired turbine when you are burning that fuel. Similarly, when your total heat input is greater than 50 percent distillate oil and fuels other than natural gas, you must meet the corresponding limit for distillate oil and fuels other than natural gas for the duration of the time that you burn that particular fuel.

§60.4330 What emission limits must I meet for sulfur dioxide (SO2)?

(a) If your turbine is located in a continental area, you must comply with either paragraph (a)(1), (a)(2), or (a)(3) of this section. If your turbine is located in Alaska, you do not have to comply with the requirements in paragraph (a) of this section until January 1, 2008.

(1) You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO2 in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output;

(2) You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO2/J (0.060 lb SO2/MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement; or

(3) For each stationary combustion turbine burning at least 50 percent biogas on a calendar month basis, as determined based on total heat input, you must not cause to be discharged into the atmosphere from the affected source any gases that contain SO2 in excess of 65 ng SO2/J (0.15 lb SO2/MMBtu) heat input.

(b) If your turbine is located in a noncontinental area or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit, you must comply with one or the other of the following conditions:

(1) You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO2 in excess of 780 ng/J (6.2 lb/MWh) gross output, or

(2) You must not burn in the subject stationary combustion turbine any fuel which contains total sulfur with potential sulfur emissions in excess of 180 ng SO2/J (0.42 lb SO2/MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.

[71 FR 38497, July 6, 2006, as amended at 74 FR 11861, Mar. 20, 2009]
General Compliance Requirements

§60.4333 What are my general requirements for complying with this subpart?

(a) You must operate and maintain your stationary combustion turbine, air pollution control equipment, 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.

(b) When an affected unit with heat recovery utilizes a common steam header with one or more combustion turbines, the owner or operator shall either:

(1) Determine compliance with the applicable NOX emissions limits by measuring the emissions combined with the emissions from the other unit(s) utilizing the common heat recovery unit; or

(2) Develop, demonstrate, and provide information satisfactory to the Administrator on methods for apportioning the combined gross energy output from the heat recovery unit for each of the affected combustion turbines. The Administrator may approve such demonstrated substitute methods for apportioning the combined gross energy output measured at the steam turbine whenever the demonstration ensures accurate estimation of emissions related under this part.

Monitoring

§60.4335 How do I demonstrate compliance for NOX if I use water or steam injection?

(a) If you are using water or steam injection to control NOX emissions, you must install, calibrate, maintain and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine when burning a fuel that requires water or steam injection for compliance.

(b) Alternatively, you may use continuous emission monitoring, as follows:

(1) Install, certify, maintain, and operate a continuous emission monitoring system (CEMS) consisting of a NOX monitor and a diluent gas (oxygen (O2) or carbon dioxide (CO2)) monitor, to determine the hourly NOX emission rate in parts per million (ppm) or pounds per million British thermal units (lb/MMBtu); and

(2) For units complying with the output-based standard, install, calibrate, maintain, and operate a fuel flow meter (or flow meters) to continuously measure the heat input to the affected unit; and

(3) For units complying with the output-based standard, install, calibrate, maintain, and operate a watt meter (or meters) to continuously measure the gross electrical output of the unit in megawatt-hours; and

(4) For combined heat and power units complying with the output-based standard, install, calibrate, maintain, and operate meters for useful recovered energy flow rate, temperature, and pressure, to continuously measure the total thermal energy output in British thermal units per hour (Btu/h).

§60.4340 How do I demonstrate continuous compliance for NOX if I do not use water or steam injection?

(a) If you are not using water or steam injection to control NOX emissions, you must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. If the NOX emission result from the performance test is less than or equal to 75 percent of the NOX emission limit for the turbine, you may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NOX emission limit for the turbine, you must resume annual performance tests.

(b) As an alternative, you may install, calibrate, maintain and operate one of the following continuous monitoring systems:
(1) Continuous emission monitoring as described in §§60.4335(b) and 60.4345, or

(2) Continuous parameter monitoring as follows:

(i) For a diffusion flame turbine without add-on selective catalytic reduction (SCR) controls, you must define parameters indicative of the unit's NOx formation characteristics, and you must monitor these parameters continuously.

(ii) For any lean premix stationary combustion turbine, you must continuously monitor the appropriate parameters to determine whether the unit is operating in low-NOx mode.

(iii) For any turbine that uses SCR to reduce NOx emissions, you must continuously monitor appropriate parameters to verify the proper operation of the emission controls.

(iv) For affected units that are also regulated under part 75 of this chapter, with state approval you can monitor the NOx emission rate using the methodology in appendix E to part 75 of this chapter, or the low mass emissions methodology in §75.19, the requirements of this paragraph (b) may be met by performing the parametric monitoring described in section 2.3 of part 75 appendix E or in §75.19(c)(1)(iv)(H).

§60.4345 What are the requirements for the continuous emission monitoring system equipment, if I choose to use this option?

If the option to use a NOx CEMS is chosen:

(a) Each NOx diluent CEMS must be installed and certified according to Performance Specification 2 (PS 2) in appendix B to this part, except the 7-day calibration drift is based on unit operating days, not calendar days. With state approval, Procedure 1 in appendix F to this part is not required. Alternatively, a NOx diluent CEMS that is installed and certified according to appendix A of part 75 of this chapter is acceptable for use under this subpart. The relative accuracy test audit (RATA) of the CEMS shall be performed on a lb/MMBtu basis.

(b) As specified in §60.13(e)(2), during each full unit operating hour, both the NOx monitor and the diluent monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained with each monitor for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required for each monitor to validate the NOx emission rate for the hour.

(c) Each fuel flowmeter shall be installed, calibrated, maintained, and operated according to the manufacturer's instructions. Alternatively, with state approval, fuel flowmeters that meet the installation, certification, and quality assurance requirements of appendix D to part 75 of this chapter are acceptable for use under this subpart.

(d) Each watt meter, steam flow meter, and each pressure or temperature measurement device shall be installed, calibrated, maintained, and operated according to manufacturer's instructions.

(e) The owner or operator shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment described in paragraphs (a), (c), and (d) of this section. For the CEMS and fuel flow meters, the owner or operator may, with state approval, satisfy the requirements of this paragraph by implementing the QA program and plan described in section 1 of appendix B to part 75 of this chapter.

§60.4350 How do I use data from the continuous emission monitoring equipment to identify excess emissions?

For purposes of identifying excess emissions:

(a) All CEMS data must be reduced to hourly averages as specified in §60.13(h).
(b) For each unit operating hour in which a valid hourly average, as described in §60.4345(b), is obtained for both NOx and diluent monitors, the data acquisition and handling system must calculate and record the hourly NOx emission rate in units of ppm or lb/MMBtu, using the appropriate equation from method 19 in appendix A of this part. For any hour in which the hourly average O2 concentration exceeds 19.0 percent O2 (or the hourly average CO2 concentration is less than 1.0 percent CO2), a diluent cap value of 19.0 percent O2 or 1.0 percent CO2 (as applicable) may be used in the emission calculations.

(c) Correction of measured NOx concentrations to 15 percent O2 is not allowed.

(d) If you have installed and certified a NOx diluent CEMS to meet the requirements of part 75 of this chapter, states can approve that only quality assured data from the CEMS shall be used to identify excess emissions under this subpart. Periods where the missing data substitution procedures in subpart D of part 75 are applied are to be reported as monitor downtime in the excess emissions and monitoring performance report required under §60.7(c).

(e) All required fuel flow rate, steam flow rate, temperature, pressure, and megawatt data must be reduced to hourly averages.

(f) Calculate the hourly average NOx emission rates, in units of the emission standards under §60.4320, using either ppm for units complying with the concentration limit or the following equation for units complying with the output based standard:

(1) For simple-cycle operation:

\[ E = \frac{(NOx)_{h}}{P} \times \frac{(HI)_{h}}{F} \]  

(Eq. 1)

Where:

\( E \) = hourly NOx emission rate, in lb/MWh,

\( (NOx)_{h} \) = hourly NOx emission rate, in lb/MMBtu,

\( (HI)_{h} \) = hourly heat input rate to the unit, in MMBtu/h, measured using the fuel flowmeter(s), e.g., calculated using Equation D-15a in appendix D to part 75 of this chapter, and

\( P \) = gross energy output of the combustion turbine in MW.

(2) For combined-cycle and combined heat and power complying with the output-based standard, use Equation 1 of this subpart, except that the gross energy output is calculated as the sum of the total electrical and mechanical energy generated by the combustion turbine, the additional electrical or mechanical energy (if any) generated by the steam turbine following the heat recovery steam generator, and 100 percent of the total useful thermal energy output that is not used to generate additional electricity or mechanical output, expressed in equivalent MW, as in the following equations:

\[ P = (Pe)_{c} + (Pe)_{e} + Ps + Po \]  

(Eq. 2)

Where:

\( P \) = gross energy output of the stationary combustion turbine system in MW.

\( (Pe)_{c} \) = electrical or mechanical energy output of the combustion turbine in MW,

\( (Pe)_{e} \) = electrical or mechanical energy output (if any) of the steam turbine in MW, and
\[
P_s = \frac{Q \cdot H}{3.413 \times 10^6 \text{ Btu/MW h}} \quad (\text{Eq. 3})
\]

Where:

\(P_s\) = useful thermal energy of the steam, measured relative to ISO conditions, not used to generate additional electric or mechanical output, in MW,

\(Q\) = measured steam flow rate in lb/h,

\(H\) = enthalpy of the steam at measured temperature and pressure relative to ISO conditions, in Btu/lb, and \(3.413 \times 10^6\) = conversion from Btu/h to MW.

\(P_o\) = other useful heat recovery, measured relative to ISO conditions, not used for steam generation or performance enhancement of the combustion turbine.

(3) For mechanical drive applications complying with the output-based standard, use the following equation:

\[
E = \frac{(\text{NO}_x)_m}{BL \cdot AL} \quad (\text{Eq. 4})
\]

Where:

\(E\) = NO\(_x\) emission rate in lb/MWh,

\((\text{NO}_x)_m\) = NO\(_x\) emission rate in lb/h,

\(BL\) = manufacturer’s base load rating of turbine, in MW, and

\(AL\) = actual load as a percentage of the base load.

(g) For simple cycle units without heat recovery, use the calculated hourly average emission rates from paragraph (f) of this section to assess excess emissions on a 4-hour rolling average basis, as described in §60.4380(b)(1).

(h) For combined cycle and combined heat and power units with heat recovery, use the calculated hourly average emission rates from paragraph (f) of this section to assess excess emissions on a 30 unit operating day rolling average basis, as described in §60.4380(b)(1).

§60.4355 How do I establish and document a proper parameter monitoring plan?

(a) The steam or water to fuel ratio or other parameters that are continuously monitored as described in §§60.4335 and 60.4340 must be monitored during the performance test required under §60.8, to establish acceptable values and ranges. You may supplement the performance test data with engineering analyses, design specifications, manufacturer’s recommendations and other relevant information to define the acceptable parametric ranges more precisely. You must develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NO\(_x\) emission controls. The plan must:

(1) Include the indicators to be monitored and show there is a significant relationship to emissions and proper operation of the NO\(_x\) emission controls,

(2) Pick ranges (or designated conditions) of the indicators, or describe the process by which such range (or designated condition) will be established,
(3) Explain the process you will use to make certain that you obtain data that are representative of the emissions or parameters being monitored (such as detector location, installation specification if applicable),

(4) Describe quality assurance and control practices that are adequate to ensure the continuing validity of the data,

(5) Describe the frequency of monitoring and the data collection procedures which you will use (e.g., you are using a computerized data acquisition over a number of discrete data points with the average (or maximum value) being used for purposes of determining whether an exceedance has occurred), and

(6) Submit justification for the proposed elements of the monitoring. If a proposed performance specification differs from manufacturer recommendation, you must explain the reasons for the differences. You must submit the data supporting the justification, but you may refer to generally available sources of information used to support the justification. You may rely on engineering assessments and other data, provided you demonstrate factors which assure compliance or explain why performance testing is unnecessary to establish indicator ranges. When establishing indicator ranges, you may choose to simplify the process by treating the parameters as if they were correlated. Using this assumption, testing can be divided into two cases:

(i) All indicators are significant only on one end of range (e.g., for a thermal incinerator controlling volatile organic compounds (VOC) it is only important to insure a minimum temperature, not a maximum). In this case, you may conduct your study so that each parameter is at the significant limit of its range while you conduct your emissions testing. If the emissions tests show that the source is in compliance at the significant limit of each parameter, then as long as each parameter is within its limit, you are presumed to be in compliance.

(ii) Some or all indicators are significant on both ends of the range. In this case, you may conduct your study so that each parameter that is significant at both ends of its range assumes its extreme values in all possible combinations of the extreme values (either single or double) of all of the other parameters. For example, if there were only two parameters, A and B, and A had a range of values while B had only a minimum value, the combinations would be A high with B minimum and A low with B minimum. If both A and B had a range, the combinations would be A high and B high, A low and B low, A high and B low, A low and B high. For the case of four parameters all having a range, there are 16 possible combinations.

(b) For affected units that are also subject to part 75 of this chapter and that have state approval to use the low mass emissions methodology in §75.19 or the NOX emission measurement methodology in appendix E to part 75, you may meet the requirements of this paragraph by developing and keeping on-site (or at a central location for unmanned facilities) a QA plan, as described in §75.19(e)(5) or in section 2.3 of appendix E to part 75 of this chapter and section 1.3.6 of appendix B to part 75 of this chapter.

§60.4360 How do I determine the total sulfur content of the turbine’s combustion fuel?

You must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in §60.4365. The sulfur content of the fuel must be determined using total sulfur methods described in §60.4415. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, ASTM D4084, D4810, D5504, or D6228, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17), which measure the major sulfur compounds, may be used.

§60.4365 How can I be exempted from monitoring the total sulfur content of the fuel?

You may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for units located in continental areas and 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for units located in noncontinental areas or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit. You must use one of the following sources of information to make the required demonstration:

(a) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for oil use in continental areas is 0.05 weight percent (500 ppmw) or less and 0.4 weight percent (4,000 ppmw) or less for noncontinental areas, the total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet and 140 grains of sulfur
or less per 100 standard cubic feet for noncontinental areas, has potential sulfur emissions of less than less than 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas and has potential sulfur emissions of less than less than 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for noncontinental areas; or

(b) Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas or 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for noncontinental areas. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required.

§60.4370 How often must I determine the sulfur content of the fuel?

The frequency of determining the sulfur content of the fuel must be as follows:

(a) Fuel oil. For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of appendix D to part 75 of this chapter (i.e., flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank).

(b) Gaseous fuel. If you elect not to demonstrate sulfur content using options in §60.4365, and the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel must be determined and recorded once per unit operating day.

(c) Custom schedules. Notwithstanding the requirements of paragraph (b) of this section, operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in paragraphs (c)(1) and (c)(2) of this section, custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in §60.4330.

(1) The two custom sulfur monitoring schedules set forth in paragraphs (c)(1)(i) through (iv) and in paragraph (c)(2) of this section are acceptable, without prior Administrative approval:

(i) The owner or operator shall obtain daily total sulfur content measurements for 30 consecutive unit operating days, using the applicable methods specified in this subpart. Based on the results of the 30 daily samples, the required frequency for subsequent monitoring of the fuel's total sulfur content shall be as specified in paragraph (c)(1)(ii), (iii), or (iv) of this section, as applicable.

(ii) If none of the 30 daily measurements of the fuel's total sulfur content exceeds half the applicable standard, subsequent sulfur content monitoring may be performed at 12-month intervals. If any of the samples taken at 12-month intervals has a total sulfur content greater than half but less than the applicable limit, follow the procedures in paragraph (c)(1)(iii) of this section. If any measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section.

(iii) If at least one of the 30 daily measurements of the fuel's total sulfur content is greater than half but less than the applicable limit, but none exceeds the applicable limit, then:

(A) Collect and analyze a sample every 30 days for 3 months. If any sulfur content measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section. Otherwise, follow the procedures in paragraph (c)(1)(iii)(B) of this section.

(B) Begin monitoring at 6-month intervals for 12 months. If any sulfur content measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section. Otherwise, follow the procedures in paragraph (c)(1)(iii)(C) of this section.

(C) Begin monitoring at 12-month intervals. If any sulfur content measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section. Otherwise, continue to monitor at this frequency.
If a sulfur content measurement exceeds the applicable limit, immediately begin daily monitoring according to paragraph (c)(1)(ii) of this section. Daily monitoring shall continue until 30 consecutive daily samples, each having a sulfur content no greater than the applicable limit, are obtained. At that point, the applicable procedures of paragraph (c)(1)(ii) or (iii) of this section shall be followed.

(2) The owner or operator may use the data collected from the 720-hour sulfur sampling demonstration described in section 2.3.6 of appendix D to part 75 of this chapter to determine a custom sulfur sampling schedule, as follows:

(i) If the maximum fuel sulfur content obtained from the 720 hourly samples does not exceed 20 grains/100 scf, no additional monitoring of the sulfur content of the gas is required, for the purposes of this subpart.

(ii) If the maximum fuel sulfur content obtained from any of the 720 hourly samples exceeds 20 grains/100 scf, but none of the sulfur content values (when converted to weight percent sulfur) exceeds half the applicable limit, then the minimum required sampling frequency shall be one sample at 12 month intervals.

(iii) If any sample result exceeds half the applicable limit, but none exceeds the applicable limit, follow the provisions of paragraph (c)(1)(iii) of this section.

(iv) If the sulfur content of any of the 720 hourly samples exceeds the applicable limit, follow the provisions of paragraph (c)(1)(iv) of this section.

**Reporting**

§60.4375 What reports must I submit?

(a) For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content under this subpart, you must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction.

(b) For each affected unit that performs annual performance tests in accordance with §60.4340(a), you must submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test.

§60.4380 How are excess emissions and monitor downtime defined for NOX?

For the purpose of reports required under §60.7(c), periods of excess emissions and monitor downtime that must be reported are defined as follows:

(a) For turbines using water or steam to fuel ratio monitoring:

(1) An excess emission is any unit operating hour for which the 4-hour rolling average steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable steam or water to fuel ratio needed to demonstrate compliance with §60.4320, as established during the performance test required in §60.8. Any unit operating hour in which no water or steam is injected into the turbine when a fuel is being burned that requires water or steam injection for NOx control will also be considered an excess emission.

(2) A period of monitor downtime is any unit operating hour in which water or steam is injected into the turbine, but the essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid.

(3) Each report must include the average steam or water to fuel ratio, average fuel consumption, and the combustion turbine load during each excess emission.

(b) For turbines using continuous emission monitoring, as described in §§60.4335(b) and 60.4345:
(1) An excess emissions is any unit operating period in which the 4-hour or 30-day rolling average NOX emission rate exceeds the applicable emission limit in §60.4320. For the purposes of this subpart, a “4-hour rolling average NOX emission rate” is the arithmetic average of the average NOX emission rate in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given hour and the three unit operating hour average NOX emission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid NOX emission rate is obtained for at least 3 of the 4 hours. For the purposes of this subpart, a “30-day rolling average NOX emission rate” is the arithmetic average of all hourly NOX emission data in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30-day average is calculated each unit operating day as the average of all hourly NOX emissions rates for the preceding 30 unit operating days if a valid NOX emission rate is obtained for at least 75 percent of all operating hours.

(2) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NOX concentration, CO2 or O2 concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.

(3) For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.

(c) For turbines required to monitor combustion parameters or parameters that document proper operation of the NOX emission controls:

(1) An excess emission is a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the unit.

(2) A period of monitor downtime is a unit operating hour in which any of the required parametric data are either not recorded or are invalid.

§60.4385 How are excess emissions and monitoring downtime defined for SO2?

If you choose the option to monitor the sulfur content of the fuel, excess emissions and monitoring downtime are defined as follows:

(a) For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the combustion turbine exceeds the applicable limit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.

(b) If the option to sample each delivery of fuel oil has been selected, you must immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.05 weight percent. You must continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and you must evaluate excess emissions according to paragraph (a) of this section. When all of the fuel from the delivery has been burned, you may resume using the as-delivered sampling option.

(c) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample.

§60.4390 What are my reporting requirements if I operate an emergency combustion turbine or a research and development turbine?

(a) If you operate an emergency combustion turbine, you are exempt from the NOX limit and must submit an initial report to the Administrator stating your case.
(b) Combustion turbines engaged by manufacturers in research and development of equipment for both combustion turbine emission control techniques and combustion turbine efficiency improvements may be exempted from the NOx limit on a case-by-case basis as determined by the Administrator. You must petition for the exemption.

§60.4395 When must I submit my reports?

All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period.

Performance Tests

§60.4400 How do I conduct the initial and subsequent performance tests, regarding NOx?

(a) You must conduct an initial performance test, as required in §60.8. Subsequent NOx performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test).

(1) There are two general methodologies that you may use to conduct the performance tests. For each test run:

(i) Measure the NOx concentration (in parts per million (ppm)), using EPA Method 7E or EPA Method 20 in appendix A of this part. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in appendix A of this part, and measure and record the electrical and thermal output from the unit. Then, use the following equation to calculate the NOx emission rate:

\[
E = \frac{1.194 \times 10^{-7} \times (NO_x)_c \times Q_{std}}{P} \quad (Eq. 5)
\]

Where:

\( E \) = NOx emission rate, in lb/MWh

\( 1.194 \times 10^{-7} \) = conversion constant, in lb/dscf-ppm

\((NO_x)_c\) = average NOx concentration for the run, in ppm

\( Q_{std} \) = stack gas volumetric flow rate, in dscf/hr

\( P \) = gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to §60.4350(f)(2); or

(ii) Measure the NOx and diluent gas concentrations, using either EPA Methods 7E and 3A, or EPA Method 20 in appendix A of this part. Concurrently measure the heat input to the unit, using a fuel flowmeter (or flowmeters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in appendix A of this part to calculate the NOx emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in §60.4350(f) to calculate the NOx emission rate in lb/MWh.

(2) Sampling traverse points for NOx and (if applicable) diluent gas are to be selected following EPA Method 20 or EPA Method 1 (non-particulate procedures), and sampled for equal time intervals. The sampling must be performed with a traversing single-hole probe, or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points.

(3) Notwithstanding paragraph (a)(2) of this section, you may test at fewer points than are specified in EPA Method 1 or EPA Method 20 in appendix A of this part if the following conditions are met:
(i) You may perform a stratification test for NO\textsubscript{X} and diluent pursuant to

(A) [Reserved], or

(B) The procedures specified in section 6.5.6.1(a) through (e) of appendix A of part 75 of this chapter.

(ii) Once the stratification sampling is completed, you may use the following alternative sample point selection criteria for the performance test:

(A) If each of the individual traverse point NO\textsubscript{X} concentrations is within ±10 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±5ppm or ±0.5 percent CO\textsubscript{2} (or O\textsubscript{2}) from the mean for all traverse points, then you may use three points (located either 16.7, 50.0 and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters (7.8 feet) in diameter, at 0.4, 1.2, and 2.0 meters from the wall). The three points must be located along the measurement line that exhibited the highest average NO\textsubscript{X} concentration during the stratification test; or

(B) For turbines with a NO\textsubscript{X} standard greater than 15 ppm @ 15% O\textsubscript{2}, you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NO\textsubscript{X} concentrations is within ±5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±3ppm or ±0.3 percent CO\textsubscript{2} (or O\textsubscript{2}) from the mean for all traverse points; or

(C) For turbines with a NO\textsubscript{X} standard less than or equal to 15 ppm @ 15% O\textsubscript{2}, you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NO\textsubscript{X} concentrations is within ±2.5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±1ppm or ±0.15 percent CO\textsubscript{2} (or O\textsubscript{2}) from the mean for all traverse points.

(b) The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. You may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice. You must conduct three separate test runs for each performance test. The minimum time per run is 20 minutes.

(1) If the stationary combustion turbine combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel.

(2) For a combined cycle and CHP turbine systems with supplemental heat (duct burner), you must measure the total NO\textsubscript{X} emissions after the duct burner rather than directly after the turbine. The duct burner must be in operation during the performance test.

(3) If water or steam injection is used to control NO\textsubscript{X} with no additional post-combustion NO\textsubscript{X} control and you choose to monitor the steam or water to fuel ratio in accordance with §60.4335, then that monitoring system must be operated concurrently with each EPA Method 20 or EPA Method 7E run and must be used to determine the fuel consumption and the steam or water to fuel ratio necessary to comply with the applicable §60.4320 NO\textsubscript{X} emission limit.

(4) Compliance with the applicable emission limit in §60.4320 must be demonstrated at each tested load level. Compliance is achieved if the three-run arithmetic average NO\textsubscript{X} emission rate at each tested level meets the applicable emission limit in §60.4320.

(5) If you elect to install a CEMS, the performance evaluation of the CEMS may either be conducted separately or (as described in §60.4405) as part of the initial performance test of the affected unit.

(6) The ambient temperature must be greater than 0 °F during the performance test.
§60.4405   How do I perform the initial performance test if I have chosen to install a NOX-diluent CEMS?

If you elect to install and certify a NOX-diluent CEMS under §60.4345, then the initial performance test required under §60.8 may be performed in the following alternative manner:

(a) Perform a minimum of nine RATA reference method runs, with a minimum time per run of 21 minutes, at a single load level, within plus or minus 25 percent of 100 percent of peak load. The ambient temperature must be greater than 0 °F during the RATA runs.

(b) For each RATA run, concurrently measure the heat input to the unit using a fuel flow meter (or flow meters) and measure the electrical and thermal output from the unit.

(c) Use the test data both to demonstrate compliance with the applicable NOX emission limit under §60.4320 and to provide the required reference method data for the RATA of the CEMS described under §60.4335.

(d) Compliance with the applicable emission limit in §60.4320 is achieved if the arithmetic average of all of the NOx emission rates for the RATA runs, expressed in units of ppm or lb/MWh, does not exceed the emission limit.

§60.4410   How do I establish a valid parameter range if I have chosen to continuously monitor parameters?

If you have chosen to monitor combustion parameters or parameters indicative of proper operation of NOX emission controls in accordance with §60.4340, the appropriate parameters must be continuously monitored and recorded during each run of the initial performance test, to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in §60.4355.

§60.4415   How do I conduct the initial and subsequent performance tests for sulfur?

(a) You must conduct an initial performance test, as required in §60.8. Subsequent SO2 performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). There are three methodologies that you may use to conduct the performance tests.

(1) If you choose to periodically determine the sulfur content of the fuel combusted in the turbine, a representative fuel sample would be collected following ASTM D5287 (incorporated by reference, see §60.17) for natural gas or ASTM D4177 (incorporated by reference, see §60.17) for oil. Alternatively, for oil, you may follow the procedures for manual pipeline sampling in section 14 of ASTM D4057 (incorporated by reference, see §60.17). The fuel analyses of this section may be performed either by you, a service contractor retained by you, the fuel vendor, or any other qualified agency. Analyze the samples for the total sulfur content of the fuel using:

(i) For liquid fuels, ASTM D129, or alternatively D1266, D1552, D2622, D4294, or D5453 (all of which are incorporated by reference, see §60.17); or

(ii) For gaseous fuels, ASTM D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17).

(2) Measure the SO2 concentration (in parts per million (ppm)), using EPA Methods 6, 6C, 8, or 20 in appendix A of this part. In addition, the American Society of Mechanical Engineers (ASME) standard, ASME PTC 19-10-1981-Part 10, “Flue and Exhaust Gas Analyses,” manual methods for sulfur dioxide (incorporated by reference, see §60.17) can be used instead of EPA Methods 6 or 20. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in appendix A of this part, and measure and record the electrical and thermal output from the unit. Then use the following equation to calculate the SO2 emission rate:

\[
E = \frac{1.664 \times 10^{-7} \times (SO_2)_{e} \times Q_{u}}{F} \quad (Eq \ 6)
\]

Where:
E = SO₂ emission rate, in lb/MWh

\[ 1.664 \times 10^{-7} \text{ = conversion constant, in lb/dscf-ppm} \]

\[(\text{SO}_2)_c \text{ = average SO}_2 \text{ concentration for the run, in ppm} \]

\[ Q_{std} \text{ = stack gas volumetric flow rate, in dscf/hr} \]

\[ P \text{ = gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to §60.4350(f)(2); or} \]

(3) Measure the SO₂ and diluent gas concentrations, using either EPA Methods 6, 6C, or 8 and 3A, or 20 in appendix A of this part. In addition, you may use the manual methods for sulfur dioxide ASME PTC 19-10-1981-Part 10 (incorporated by reference, see §60.17). Concurrently measure the heat input to the unit, using a fuel flowmeter (or flowmeters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in appendix A of this part to calculate the SO₂ emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in §60.4350(f) to calculate the SO₂ emission rate in lb/MWh.

(b) [Reserved]

Definitions

§60.4420 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein will have the meaning given them in the Clean Air Act and in subpart A (General Provisions) of this part.

**Biogas** means gas produced by the anaerobic digestion or fermentation of organic matter including manure, sewage sludge, municipal solid waste, biodegradable waste, or any other biodegradable feedstock, under anaerobic conditions. Biogas is comprised primarily of methane and CO₂.

**Combined cycle combustion turbine** means any stationary combustion turbine which recovers heat from the combustion turbine exhaust gases to generate steam that is only used to create additional power output in a steam turbine.

**Combined heat and power combustion turbine** means any stationary combustion turbine which recovers heat from the exhaust gases to heat water or another medium, generate steam for useful purposes other than additional electric generation, or directly uses the heat in the exhaust gases for a useful purpose.

**Combustion turbine model** means a group of combustion turbines having the same nominal air flow, combustor inlet pressure, combustor inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.

**Combustion turbine test cell/stand** means any apparatus used for testing uninstalled stationary or uninstalled mobile (motive) combustion turbines.

**Diffusion flame stationary combustion turbine** means any stationary combustion turbine where fuel and air are injected at the combustor and are mixed only by diffusion prior to ignition.

**Duct burner** means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary combustion turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a heat recovery steam generating unit.
Efficiency means the combustion turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output—based on the higher heating value of the fuel.

Emergency combustion turbine means any stationary combustion turbine which operates in an emergency situation. Examples include stationary combustion turbines used to produce power for critical networks or equipment, including power supplied to portions of a facility, when electric power from the local utility is interrupted, or stationary combustion turbines used to pump water in the case of fire or flood, etc. Emergency stationary combustion turbines do not include stationary combustion turbines used as peaking units at electric utilities or stationary combustion turbines at industrial facilities that typically operate at low capacity factors. Emergency combustion turbines may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are required by the manufacturer, the vendor, or the insurance company associated with the turbine. Required testing of such units should be minimized, but there is no time limit on the use of emergency combustion turbines.

Excess emissions means a specified averaging period over which either (1) the NOx emissions are higher than the applicable emission limit in §60.4320; (2) the total sulfur content of the fuel being combusted in the affected facility exceeds the limit specified in §60.4330; or (3) the recorded value of a particular monitored parameter is outside the acceptable range specified in the parameter monitoring plan for the affected unit.

Gross useful output means the gross useful work performed by the stationary combustion turbine system. For units using the mechanical energy directly or generating only electricity, the gross useful work performed is the gross electrical or mechanical output from the turbine/generator set. For combined heat and power units, the gross useful work performed is the gross electrical or mechanical output plus the useful thermal output (i.e., thermal energy delivered to a process).

Heat recovery steam generating unit means a unit where the hot exhaust gases from the combustion turbine are routed in order to extract heat from the gases and generate steam, for use in a steam turbine or other device that utilizes steam. Heat recovery steam generating units can be used with or without duct burners.

Integrated gasification combined cycle electric utility steam generating unit means a coal-fired electric utility steam generating unit that burns a synthetic gas derived from coal in a combined-cycle gas turbine. No solid coal is directly burned in the unit during operation.

ISO conditions means 288 Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.

Lean premix stationary combustion turbine means any stationary combustion turbine where the air and fuel are thoroughly mixed to form a lean mixture before delivery to the combustor. Mixing may occur before or in the combustion chamber. A lean premixed turbine may operate in diffusion flame mode during operating conditions such as startup and shutdown, extreme ambient temperature, or low or transient load.

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. Additionally, 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 (Btu) per standard cubic foot. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, the Northern Mariana Islands, or offshore platforms.

Peak load means 100 percent of the manufacturer's design capacity of the combustion turbine at ISO conditions.

Regenerative cycle combustion turbine means any stationary combustion turbine which recovers heat from the combustion turbine exhaust gases to preheat the inlet combustion air to the combustion turbine.

Simple cycle combustion turbine means any stationary combustion turbine which does not recover heat from the combustion turbine exhaust gases to preheat the inlet combustion air to the combustion turbine, or which does not
recover heat from the combustion turbine exhaust gases for purposes other than enhancing the performance of the combustion turbine itself.

*Stationary 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), heat recovery system, and any ancillary components and sub-components comprising any simple cycle stationary combustion turbine, any regenerative/recuperative cycle stationary combustion turbine, any combined cycle combustion turbine, and any combined heat and power combustion turbine based system. Stationary means that the combustion turbine is not self propelled or intended to be propelled while performing its function. It may, however, be mounted on a vehicle for portability.

*Unit operating day* means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

*Unit operating hour* means a clock hour during which any fuel is combusted in the affected unit. If the unit combusts fuel for the entire clock hour, it is considered to be a full unit operating hour. If the unit combusts fuel for only part of the clock hour, it is considered to be a partial unit operating hour.

*Useful thermal output* means the thermal energy made available for use in any industrial or commercial process, or used in any heating or cooling application, i.e., total thermal energy made available for processes and applications other than electrical or mechanical generation. Thermal output for this subpart means the energy in recovered thermal output measured against the energy in the thermal output at 15 degrees Celsius and 101.325 kilopascals of pressure.

[71 FR 38497, July 6, 2006, as amended at 74 FR 11861, Mar. 20, 2009]

### Table 1 to Subpart KKKK of Part 60—Nitrogen Oxide Emission Limits for New Stationary Combustion Turbines

<table>
<thead>
<tr>
<th>Combustion turbine type</th>
<th>Combustion turbine heat input at peak load (HHV)</th>
<th>NO\textsubscript{x} emission standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>New turbine firing natural gas, electric generating</td>
<td>≤ 50 MMBtu/h</td>
<td>42 ppm at 15 percent O\textsubscript{2} or 290 ng/J of useful output (2.3 lb/MWh).</td>
</tr>
<tr>
<td>New turbine firing natural gas, mechanical drive</td>
<td>≤ 50 MMBtu/h</td>
<td>100 ppm at 15 percent O\textsubscript{2} or 690 ng/J of useful output (5.5 lb/MWh).</td>
</tr>
<tr>
<td>New turbine firing natural gas</td>
<td>&gt; 50 MMBtu/h and ≤ 850 MMBtu/h</td>
<td>25 ppm at 15 percent O\textsubscript{2} or 150 ng/J of useful output (1.2 lb/MWh).</td>
</tr>
<tr>
<td>New, modified, or reconstructed turbine firing natural gas</td>
<td>&gt; 850 MMBtu/h</td>
<td>15 ppm at 15 percent O\textsubscript{2} or 54 ng/J of useful output (0.43 lb/MWh).</td>
</tr>
<tr>
<td>New turbine firing fuels other than natural gas, electric generating</td>
<td>≤ 50 MMBtu/h</td>
<td>96 ppm at 15 percent O\textsubscript{2} or 700 ng/J of useful output (5.5 lb/MWh).</td>
</tr>
<tr>
<td>New turbine firing fuels other than natural gas, mechanical drive</td>
<td>≤ 50 MMBtu/h</td>
<td>150 ppm at 15 percent O\textsubscript{2} or 1,100 ng/J of useful output (8.7 lb/MWh).</td>
</tr>
<tr>
<td>Combustion turbine type</td>
<td>Combustion turbine heat input at peak load (HHV)</td>
<td>NO\textsubscript{X} emission standard</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>New turbine firing fuels other than natural gas</td>
<td>&gt; 50 MMBtu/h and ≤ 850 MMBtu/h</td>
<td>74 ppm at 15 percent O\textsubscript{2} or 460 ng/J of useful output (3.6 lb/MWh).</td>
</tr>
<tr>
<td>New, modified, or reconstructed turbine firing fuels other than natural gas</td>
<td>&gt; 850 MMBtu/h</td>
<td>42 ppm at 15 percent O\textsubscript{2} or 250 ng/J of useful output (2.0 lb/MWh).</td>
</tr>
<tr>
<td>Modified or reconstructed turbine</td>
<td>≤ 50 MMBtu/h</td>
<td>150 ppm at 15 percent O\textsubscript{2} or 1,100 ng/J of useful output (8.7 lb/MWh).</td>
</tr>
<tr>
<td>Modified or reconstructed turbine firing natural gas</td>
<td>&gt; 50 MMBtu/h and ≤ 850 MMBtu/h</td>
<td>42 ppm at 15 percent O\textsubscript{2} or 250 ng/J of useful output (2.0 lb/MWh).</td>
</tr>
<tr>
<td>Modified or reconstructed turbine firing fuels other than natural gas</td>
<td>&gt; 50 MMBtu/h and ≤ 850 MMBtu/h</td>
<td>96 ppm at 15 percent O\textsubscript{2} or 590 ng/J of useful output (4.7 lb/MWh).</td>
</tr>
<tr>
<td>Turbines located north of the Arctic Circle (latitude 66.5 degrees north), turbines operating at less than 75 percent of peak load, modified and reconstructed offshore turbines, and turbine operating at temperatures less than 0 °F</td>
<td>≤ 30 MW output</td>
<td>150 ppm at 15 percent O\textsubscript{2} or 1,100 ng/J of useful output (8.7 lb/MWh).</td>
</tr>
<tr>
<td>Turbines located north of the Arctic Circle (latitude 66.5 degrees north), turbines operating at less than 75 percent of peak load, modified and reconstructed offshore turbines, and turbine operating at temperatures less than 0 °F</td>
<td>&gt; 30 MW output</td>
<td>96 ppm at 15 percent O\textsubscript{2} or 590 ng/J of useful output (4.7 lb/MWh).</td>
</tr>
<tr>
<td>Heat recovery units operating independent of the combustion turbine</td>
<td>All sizes</td>
<td>54 ppm at 15 percent O\textsubscript{2} or 110 ng/J of useful output (0.86 lb/MWh).</td>
</tr>
</tbody>
</table>
What This Subpart Covers

§63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ 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 part 70 or 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.

(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.
(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in §63.6675, which includes operating according to the provisions specified in §63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).


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

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 paragraphs (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(f).

(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 that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(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(f) 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) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(c) Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 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.

(1) A new or reconstructed stationary RICE located at an area source;

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;
(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.


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

(a) Affected sources. (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.

(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.


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?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

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

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


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

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

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.

§63.6602 What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations and other requirements in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

[78 FR 6701, Jan. 30, 2013]

§63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either paragraph (b)(1) or (2) of this section, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meet either paragraph (b)(1) or (2) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets paragraphs (b)(2)(i), (ii), and (iii) of this section.

(i) The only connection to the FAHS is through the Alaska Marine Highway System (AMHS), or the stationary RICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in 40 CFR 55.2, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

(1) Change oil every 1,000 hours of operation or annually, whichever comes first. Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or annually, whichever comes first, and replace as necessary.
(4) Inspect all flexible hoses every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in §63.6625(g). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in §63.6625(g) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112, you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart III instead of the emission limitations and other requirements that would otherwise apply under this part for existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions.

(f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in §63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in §63.6675 of this subpart as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in §63.6675 of this subpart, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.


§63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?

(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) Beginning January 1, 2015, if you own or operate a new emergency CI stationary RICE with a site rating of more than 500 brake HP and a displacement of less than 30 liters per cylinder located at a major source of HAP that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.
(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2), or are on offshore vessels that meet §63.6603(c) are exempt from the requirements of this section.

[78 FR 6702, Jan. 30, 2013]

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, operating limitations, and other requirements in this subpart that apply to you at all times.

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


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 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 §63.7(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 new or reconstructed 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.


§63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

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

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

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

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

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

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


§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 I 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 that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.

(1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

(3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(c) [Reserved]

(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, unless otherwise specified in this subpart.

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

\[
\frac{C_i - C_o}{C_i} \times 100 = R \quad (Eq. 1)
\]

Where:

\(C_i\) = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

\(C_o\) = concentration of CO, THC, or formaldehyde at the control device outlet, and

\(R\) = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, 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 Fo value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

\[
F_o = \frac{0.209 \times F_d}{F_C} \quad (Eq. 2)
\]

Where:
F₀ = Fuel factor based on the ratio of oxygen volume to the ultimate CO₂ volume 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 CO₂ produced to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/106 Btu).

(ii) Calculate the CO₂ correction factor for correcting measurement data to 15 percent O₂, as follows:

\[ X_{CO₂} = \frac{5.9}{F₀} \]  \hspace{1cm} (Eq. 3)

Where:

X_{CO₂} = CO₂ correction factor, percent.

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

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O₂ using CO₂ as follows:

\[ C_{adj} = C_d \frac{X_{CO₂}}{9 \%CO₂} \]  \hspace{1cm} (Eq. 4)

Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O₂.

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO₂} = CO₂ correction factor, percent.

%CO₂ = Measured CO₂ concentration 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 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, collection, 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 O2 or CO2 according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(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 CO₂ concentration.

(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 paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(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.
(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer’s emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

1. An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;
2. An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;
3. An existing emergency or black start stationary RICE located at an area source of HAP emissions;
4. An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;
5. An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;
6. An existing non-emergency, non-black start stationary RICE located at an area 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.
7. An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;
8. An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;
9. An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and
10. An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet §63.6603(c) do not have to meet the requirements of this paragraph (g).

1. Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or
2. Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.
(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

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

(a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement 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.

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

(e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least three test runs.
(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O₂ using one of the O₂ measurement methods specified in Table 4 of this subpart. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O₂ emissions simultaneously at the inlet and outlet of the control device.


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, required performance evaluations, and required quality assurance or control activities, you 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.

(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.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

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

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

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

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:
(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O₂ using one of the O₂ measurement methods specified in Table 4 of this subpart. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O₂ emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

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

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.
(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, 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.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the
engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.


Notifications, Reports, and Records

§63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following:

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(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).

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an
area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112
and subject to an enforceable state or local standard requiring engine replacement and you intend to meet
management practices rather than emission limits, as specified in §63.6603(d), you must submit a notification by
March 3, 2013, stating that you intend to use the provision in §63.6603(d) and identifying the state or local regulation
that the engine is subject to.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6705,
Jan. 30, 2013]

§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 (b)(9) of this section.

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

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

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

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

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

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance
date that is specified for your affected source in §63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than
January 31 following the end of the first calendar year after the compliance date that is specified for your affected
source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from
January 1 through December 31.
(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) 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 malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

(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 high-level 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.

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or
is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in
§63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must submit an annual
report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

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

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time
for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii).
(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §63.13.


§63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) 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) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.

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

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

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

(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.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE:

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) through (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in §63.6640(f)(2)(ii) or (iii) or §63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

§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 for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).


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

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

[75 FR 9678, Mar. 3, 2010]

§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:

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

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.

Backup power for renewable energy means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see §63.14).

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 et seq., as amended by Public Law 101-549, 104 Stat. 2399).
Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

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. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (e.g. biodiesel) that is suitable for use in compression ignition engines.

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 reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

(1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. 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.

(2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §63.6640(f).
(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §63.6640(f)(2)(ii) or (iii) and §63.6640(f)(4)(i) or (ii).

*Engine startup* means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

*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, diethylene 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.

*Institutional emergency stationary RICE* means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

*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 (NOx) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NOx, 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 transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility 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.

**Propane** means a colorless gas derived from petroleum and natural gas, with the molecular structure C3H8.
Remote stationary RICE means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this paragraph (2), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

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 NOx (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 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 CI 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 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.

Table 1a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

<table>
<thead>
<tr>
<th>For each...</th>
<th>You must meet the following emission limitation, except during periods of startup...</th>
<th>During periods of startup you must...</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 4SRB stationary RICE</td>
<td>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</td>
<td>Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.¹</td>
</tr>
<tr>
<td></td>
<td>b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O₂</td>
<td></td>
</tr>
</tbody>
</table>

¹ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>You must meet the following operating limitation, except during periods of startup . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. existing, new and reconstructed 4SRB stationary RICE &gt;500 HP located at a major source of HAP emissions 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 existing, new and reconstructed 4SRB stationary RICE &gt;500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O₂ and using NSCR;</td>
<td>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 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.¹</td>
</tr>
<tr>
<td>2. existing, new and reconstructed 4SRB stationary RICE &gt;500 HP located at a major source of HAP emissions 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 existing, new and reconstructed 4SRB stationary RICE &gt;500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O₂ and not using NSCR.</td>
<td>Comply with any operating limitations approved by the Administrator.</td>
</tr>
</tbody>
</table>

¹Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6706, Jan. 30, 2013]

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

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>You must meet the following emission limitation, except during periods of startup . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 2SLB stationary RICE</td>
<td>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 O₂. 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 O₂ until June 15, 2007</td>
</tr>
<tr>
<td>2. 4SLB stationary RICE</td>
<td>b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O₂</td>
</tr>
<tr>
<td></td>
<td>b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O₂</td>
</tr>
</tbody>
</table>

Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.¹

¹Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
For each . . . | You must meet the following emission limitation, except during periods of startup . . . | During periods of startup you must . . .
---|---|---
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 ppbv or less at 15 percent O₂ |  

Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

Table 2b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP

As stated in §§63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; and existing CI stationary RICE >500 HP:

| For each . . . | You must meet the following operating limitation, except during periods of startup . . . |
---|---|
1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst | a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and | b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.¹ |
2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO 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 from the pressure drop across the catalyst that was measured during the initial performance test; and | b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.¹ |
3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and | Comply with any operating limitations approved by the Administrator. | New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and |
For each . . . | You must meet the following operating limitation, except during periods of startup . . .
--- | ---
existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst. |  

1Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6707, Jan. 30, 2013]

Table 2c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>You must meet the following requirement, except during periods of startup . . .</th>
<th>During periods of startup you must . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Emergency stationary CI RICE and black start stationary CI RICE 1</td>
<td>a. Change oil and filter every 500 hours of operation or annually, whichever comes first.2</td>
<td>Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.3</td>
</tr>
<tr>
<td></td>
<td>b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.3</td>
<td></td>
</tr>
<tr>
<td>2. Non-Emergency, non-black start stationary CI RICE &lt;100 HP</td>
<td>a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.3</td>
<td></td>
</tr>
<tr>
<td>3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP</td>
<td>Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O₂.</td>
<td></td>
</tr>
<tr>
<td>For each . . .</td>
<td>You must meet the following requirement, except during periods of startup . . .</td>
<td>During periods of startup you must . . .</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>4. Non-Emergency, non-black start CI stationary RICE 300&lt;HP≤500</td>
<td>a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O₂; or b. Reduce CO emissions by 70 percent or more.</td>
<td></td>
</tr>
<tr>
<td>5. Non-Emergency, non-black start stationary CI RICE &gt;500 HP</td>
<td>a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O₂; or b. Reduce CO emissions by 70 percent or more.</td>
<td></td>
</tr>
<tr>
<td>6. Emergency stationary SI RICE and black start stationary SI RICE.¹</td>
<td>a. Change oil and filter every 500 hours of operation or annually, whichever comes first;² b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.³</td>
<td></td>
</tr>
<tr>
<td>7. Non-Emergency, non-black start stationary SI RICE &lt;100 HP that are not 2SLB stationary RICE</td>
<td>a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;² b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.³</td>
<td></td>
</tr>
<tr>
<td>8. Non-Emergency, non-black start 2SLB stationary SI RICE &lt;100 HP</td>
<td>a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;² b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.³</td>
<td></td>
</tr>
<tr>
<td>For each . . .</td>
<td>You must meet the following requirement, except during periods of startup . . .</td>
<td>During periods of startup you must . . .</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500</td>
<td>Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O₂.</td>
<td></td>
</tr>
<tr>
<td>10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500</td>
<td>Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O₂.</td>
<td></td>
</tr>
<tr>
<td>11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500</td>
<td>Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O₂.</td>
<td></td>
</tr>
<tr>
<td>12. Non-emergency, non-black start stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis</td>
<td>Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O₂.</td>
<td></td>
</tr>
</tbody>
</table>

1If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

2Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2c of this subpart.

3Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[78 FR 6708, Jan. 30, 2013, as amended at 78 FR 14457, Mar. 6, 2013]
Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>You must meet the following requirement, except during periods of startup . . .</th>
<th>During periods of startup you must . . .</th>
</tr>
</thead>
</table>
| 1. Non-Emergency, non-black start CI stationary RICE ≤300 HP | a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;1  
b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;  
c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. | Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. |
| 2. Non-Emergency, non-black start CI stationary RICE 300<HP≤500 | a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O₂; or  
b. Reduce CO emissions by 70 percent or more. | |
| 3. Non-Emergency, non-black start CI stationary RICE >500 HP | a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O₂; or  
b. Reduce CO emissions by 70 percent or more. | |
| 4. Emergency stationary CI RICE and black start stationary CI RICE.2 | a. Change oil and filter every 500 hours of operation or annually, whichever comes first;1  
b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and  
c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. | |
<table>
<thead>
<tr>
<th>For each . . .</th>
<th>You must meet the following requirement, except during periods of startup . . .</th>
<th>During periods of startup you must . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE &gt;500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE &gt;500 HP that operate 24 hours or less per calendar year.²</td>
<td>a. Change oil and filter every 500 hours of operation or annually, whichever comes first;¹</td>
<td></td>
</tr>
<tr>
<td>6. Non-emergency, non-black start 2SLB stationary RICE</td>
<td>a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;¹</td>
<td></td>
</tr>
<tr>
<td>7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP</td>
<td>a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;¹</td>
<td></td>
</tr>
<tr>
<td>8. Non-emergency, non-black start 4SLB remote stationary RICE &gt;500 HP</td>
<td>a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;¹</td>
<td></td>
</tr>
<tr>
<td>For each . . .</td>
<td>You must meet the following requirement, except during periods of startup . . .</td>
<td>During periods of startup you must . . .</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>-----------------------------------------</td>
</tr>
<tr>
<td></td>
<td>c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.</td>
<td></td>
</tr>
<tr>
<td>9. Non-emergency, non-black start 4SLB stationary RICE &gt;500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year</td>
<td>Install an oxidation catalyst to reduce HAP emissions from the stationary RICE.</td>
<td></td>
</tr>
<tr>
<td>10. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP</td>
<td>a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;(^1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.</td>
<td></td>
</tr>
<tr>
<td>11. Non-emergency, non-black start 4SRB remote stationary RICE &gt;500 HP</td>
<td>a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;(^1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.</td>
<td></td>
</tr>
<tr>
<td>12. Non-emergency, non-black start 4SRB stationary RICE &gt;500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year</td>
<td>Install NSCR to reduce HAP emissions from the stationary RICE.</td>
<td></td>
</tr>
<tr>
<td>13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis</td>
<td>a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;(^1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and</td>
<td></td>
</tr>
</tbody>
</table>
For each . . . | You must meet the following requirement, except during periods of startup . . . | During periods of startup you must . . . |
---|---|---|
| c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary. |

1Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

2If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[78 FR 6709, Jan. 30, 2013]

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

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

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>Complying with the requirement to . . .</th>
<th>You must . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. New or reconstructed 2SLB stationary RICE &gt;500 HP located at major sources; new or reconstructed 4SLB stationary RICE ≥250 HP located at major sources; and new or reconstructed CI stationary RICE &gt;500 HP located at major sources</td>
<td>Reduce CO emissions and not using a CEMS</td>
<td>Conduct subsequent performance tests semiannually.1</td>
</tr>
<tr>
<td>2. 4SRB stationary RICE ≥5,000 HP located at major sources</td>
<td>Reduce formaldehyde emissions</td>
<td>Conduct subsequent performance tests semiannually.1</td>
</tr>
<tr>
<td>3. Stationary RICE ≥500 HP located at major sources and new or reconstructed 4SLB stationary RICE 250≤HP≤500 located at major sources</td>
<td>Limit the concentration of formaldehyde in the stationary RICE exhaust</td>
<td>Conduct subsequent performance tests semiannually.1</td>
</tr>
<tr>
<td>4. Existing non-emergency, non-black start CI stationary RICE &gt;500 HP that are not limited use stationary RICE</td>
<td>Limit or reduce CO emissions and not using a CEMS</td>
<td>Conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first.</td>
</tr>
<tr>
<td>5. Existing non-emergency, non-black start CI stationary RICE &gt;500 HP that are limited use stationary RICE</td>
<td>Limit or reduce CO emissions and not using a CEMS</td>
<td>Conduct subsequent performance tests every 8,760 hours or 5 years, whichever comes first.</td>
</tr>
</tbody>
</table>

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.

[78 FR 6711, Jan. 30, 2013]
Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

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:

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

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>Complying with the requirement to . . .</th>
<th>You must . . .</th>
<th>Using . . .</th>
<th>According to the following requirements . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 2SLB, 4SLB, and CI stationary RICE</td>
<td>a. reduce CO emissions</td>
<td>i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and</td>
<td>(a) For CO and O₂ measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts &gt;6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is &gt;12 inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.</td>
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<tr>
<td></td>
<td></td>
<td>ii. Measure the O₂ at the inlet and outlet of the control device; and</td>
<td>(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)abc (heated probe not necessary)</td>
<td>(b) Measurements to determine O₂ must be made at the same time as the measurements for CO concentration.</td>
</tr>
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<tr>
<td></td>
<td></td>
<td>iii. Measure the CO at the inlet and the outlet of the control device</td>
<td>(1) ASTM D6522-00 (Reapproved 2005)abc (heated probe not necessary) or Method 10 of 40 CFR part 60, appendix A-4</td>
<td>(c) The CO concentration must be at 15 percent O₂, dry basis.</td>
</tr>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You must . . .</td>
<td>Using . . .</td>
<td>According to the following requirements . . .</td>
</tr>
<tr>
<td>----------------</td>
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<td>---------------------------------------------</td>
</tr>
<tr>
<td>2. 4SRB stationary RICE</td>
<td>a. reduce formaldehyde emissions</td>
<td>i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and</td>
<td>(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)¹ (heated probe not necessary)</td>
<td>(a) For formaldehyde, O₂, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts &gt;6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (‘3-point long line’). If the duct is &gt;12 inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at ‘3-point long line’; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Measure O₂ at the inlet and outlet of the control device; and</td>
<td>(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03a</td>
<td>(a) Measurements to determine O₂ concentration must be made at the same time as the measurements for formaldehyde or THC concentration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii. Measure moisture content at the inlet and outlet of the control device; and</td>
<td>(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03a, 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</td>
<td>(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.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formaldehyde at the inlet and the outlet of the control device</td>
<td>(1) Method 25A, reported as propane, of 40 CFR part 60, appendix A-7</td>
<td>(a) THC 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.</td>
</tr>
<tr>
<td>For each</td>
<td>Complying with the requirement to</td>
<td>You must . . .</td>
<td>Using . . .</td>
<td>According to the following requirements . . .</td>
</tr>
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<td>-----------------------------------------------</td>
</tr>
<tr>
<td>3. Stationary RICE</td>
<td>a. limit the concentration of formaldehyde or CO in the stationary RICE exhaust</td>
<td>i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary RICE; and</td>
<td>(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)(^a) (heated probe not necessary)</td>
<td>(a) For formaldehyde, CO, (O_2), and moisture measurement, ducts (\leq 6) inches in diameter may be sampled at a single point located at the duct centroid and ducts (&gt; 6) and (\leq 12) inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (‘3-point long line’). If the duct is (&gt; 12) inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at ‘3-point long line’; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A. If using a control device, the sampling site must be located at the outlet of the control device.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(b) Measurements to determine (O_2) concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.</td>
</tr>
<tr>
<td></td>
<td>ii. Determine the (O_2) concentration of the stationary RICE exhaust at the sampling port location; and</td>
<td>(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03(^a)</td>
<td>(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(b) Formaldehyde concentration must be at 15 percent (O_2), dry basis. Results of this test consist of the average of the three 1-hour or longer runs.</td>
</tr>
<tr>
<td></td>
<td>iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and</td>
<td>(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03(^a), 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</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>iv. Measure formaldehyde at the exhaust of the stationary RICE; or</td>
<td>(1) Method 10 of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (2005)(^c), Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03(^a)</td>
<td>(a) CO concentration must be at 15 percent (O_2), dry basis. Results of this test consist of the average of the three 1-hour or longer runs.</td>
<td></td>
</tr>
</tbody>
</table>
You may also use Methods 3A and 10 as options to ASTM-D6522-00 (2005). You may obtain a copy of ASTM-D6522-00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

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

[79 FR 11290, Feb. 27, 2014]

Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations, Operating Limitations, and Other Requirements

As stated in §§63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>Complying with the requirement to . . .</th>
<th>You have demonstrated initial compliance if . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. New or reconstructed non-emergency 2SLB stationary RICE &gt;500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE &gt;500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE &gt;500 HP located at an area source of HAP</td>
<td>a. Reduce CO emissions and using oxidation catalyst, and using a CPMS</td>
<td>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.</td>
</tr>
<tr>
<td>2. Non-emergency stationary CI RICE &gt;500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE &gt;500 HP located at an area source of HAP</td>
<td>a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS</td>
<td>i. The average CO concentration determined from the initial performance test is less than or equal to the CO 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.</td>
</tr>
<tr>
<td>3. New or reconstructed non-emergency 2SLB stationary RICE &gt;500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE &gt;500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE &gt;500 HP located at an area source of HAP</td>
<td>a. Reduce CO emissions and not using oxidation catalyst</td>
<td>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.</td>
</tr>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You have demonstrated initial compliance if . . .</td>
</tr>
<tr>
<td>---------------</td>
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<td>--------------------------------------------------</td>
</tr>
<tr>
<td>4. Non-emergency stationary CI RICE &gt;500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE &gt;500 HP located at an area source of HAP</td>
<td>a. Limit the concentration of CO, and not using oxidation catalyst</td>
<td>i. The average CO concentration determined from the initial performance test is less than or equal to the CO 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.</td>
</tr>
<tr>
<td>5. New or reconstructed non-emergency 2SLB stationary RICE &gt;500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE &gt;500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE &gt;500 HP located at an area source of HAP</td>
<td>a. Reduce CO emissions, and using a CEMS</td>
<td>i. You have installed a CEMS to continuously monitor CO and either O₂ or CO₂ at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.</td>
</tr>
<tr>
<td>6. Non-emergency stationary CI RICE &gt;500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE &gt;500 HP located at an area source of HAP</td>
<td>a. Limit the concentration of CO, and using a CEMS</td>
<td>i. You have installed a CEMS to continuously monitor CO and either O₂ or CO₂ at the outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and iii. The average concentration of CO calculated using §63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.</td>
</tr>
<tr>
<td>7. Non-emergency 4SRB stationary RICE &gt;500 HP located at a major source of HAP</td>
<td>a. Reduce formaldehyde emissions and using NSCR</td>
<td>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, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and</td>
</tr>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You have demonstrated initial compliance if . . .</td>
</tr>
<tr>
<td>---------------</td>
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<td>----------------------------------------------------</td>
</tr>
<tr>
<td>8. Non-emergency 4SRB stationary RICE &gt;500 HP located at a major source of HAP</td>
<td>a. Reduce formaldehyde emissions and not using NSCR</td>
<td>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 or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; 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.</td>
</tr>
<tr>
<td>9. New or reconstructed non-emergency stationary RICE &gt;500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE &gt;500 HP located at a major source of HAP</td>
<td>a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR</td>
<td>i. The average formaldehyde concentration, corrected to 15 percent O₂, 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.</td>
</tr>
<tr>
<td>10. New or reconstructed non-emergency stationary RICE &gt;500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE &gt;500 HP located at a major source of HAP</td>
<td>a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR</td>
<td>i. The average formaldehyde concentration, corrected to 15 percent O₂, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.</td>
</tr>
<tr>
<td>11. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300&lt;HP≤500 located at an area source of HAP</td>
<td>a. Reduce CO emissions</td>
<td>i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.</td>
</tr>
</tbody>
</table>
For each . . . | Complying with the requirement to . . . | You have demonstrated initial compliance if . . .
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12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP | a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust | i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O₂, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.
13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year | a. Install an oxidation catalyst | i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂; ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F.
14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year | a. Install NSCR | i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O₂, or the average reduction of emissions of THC is 30 percent or more; ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F.

[78 FR 6712, Jan. 30, 2013]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements

As stated in §63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

| For each . . . | Complying with the requirement to . . . | You must demonstrate continuous compliance by . . .
---|---|---
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP | 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; and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
<table>
<thead>
<tr>
<th>For each . . .</th>
<th>Complying with the requirement to . . .</th>
<th>You must demonstrate continuous compliance by . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>
| 2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP | 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; 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. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP | a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, 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 or concentration 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, or that the emission remain at or below the CO concentration limit; 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. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP | 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. |
For each . . . | Complying with the requirement to . . . | You must demonstrate continuous compliance by . . .
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5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP | a. Reduce formaldehyde emissions and not using NSCR | i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
ii. Reducing these data to 4-hour rolling averages; and
iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP | a. Reduce formaldehyde emissions | Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved, or to demonstrate that the average reduction of emissions of THC determined from the performance test is equal to or greater than 30 percent.
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250 ≤ HP ≤ 500 located at a major source of HAP | a. 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; 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. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250 ≤ HP ≤ 500 located at a major source of HAP | a. 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; 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.
<table>
<thead>
<tr>
<th>For each . . .</th>
<th>Complying with the requirement to . . .</th>
<th>You must demonstrate continuous compliance by . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE &lt;100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency stationary SI RICE located at an area source of HAP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE &gt;500 HP located at an area source of HAP that operate 24 hours or less per calendar year, and existing non-emergency 4SLB and 4SRB stationary RICE &gt;500 HP located at an area source of HAP that are remote stationary RICE</td>
<td>a. Work or Management practices</td>
<td>i. Operating and maintaining the stationary RICE according to the manufacturer’s emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.</td>
</tr>
<tr>
<td>10. Existing stationary CI RICE &gt;500 HP that are not limited use stationary RICE</td>
<td>a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and using oxidation catalyst</td>
<td>i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; 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.</td>
</tr>
<tr>
<td>11. Existing stationary CI RICE &gt;500 HP that are not limited use stationary RICE</td>
<td>a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst</td>
<td>i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and</td>
</tr>
</tbody>
</table>
For each . . . | Complying with the requirement to . . . | You must demonstrate continuous compliance by . . .
---|---|---
12. Existing limited use CI stationary RICE >500 HP | a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst |  

<p>| | | |</p>
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<tbody>
<tr>
<td></td>
<td>ii. Reducing these data to 4-hour rolling averages; and</td>
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<td></td>
<td>iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.</td>
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<tr>
<td></td>
<td>i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>iii. Reducing these data to 4-hour rolling averages; and</td>
<td></td>
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<tr>
<td></td>
<td>iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and</td>
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<td></td>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>

13. Existing limited use CI stationary RICE >500 HP | a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using an oxidation catalyst |   |

<p>| | | |</p>
<table>
<thead>
<tr>
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<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>iii. Reducing these data to 4-hour rolling averages; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.</td>
<td></td>
</tr>
</tbody>
</table>
For each . . . | Complying with the requirement to . . . | You must demonstrate continuous compliance by . . .
---|---|---
14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year | a. Install an oxidation catalyst | i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O\textsubscript{2}; and either 
ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature; or 
iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F. |

15. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year | a. Install NSCR | i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O\textsubscript{2}, or the average reduction of emissions of THC is 30 percent or more; and either 
ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or 
iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F. |

\[78 \text{ FR 6715, Jan. 30, 2013}\]
Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

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

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>You must submit a . . .</th>
<th>The report must contain . . .</th>
<th>You must submit the report . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Existing non-emergency, non-black start stationary RICE 100s&lt;HP&lt;500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE &gt;500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE &gt;500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE &gt;300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE &gt;500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP</td>
<td>Compliance report</td>
<td>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</td>
<td>i. Semiannually according to the requirements in §63.6650(b)(1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in §63.6650(b)(6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>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</td>
<td>i. Semiannually according to the requirements in §63.6650(b).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4).</td>
<td>i. Semiannually according to the requirements in §63.6650(b).</td>
</tr>
<tr>
<td>2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis</td>
<td>Report</td>
<td>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</td>
<td>i. Annually, according to the requirements in §63.6650.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and</td>
<td>i. See item 2.a.i.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c. Any problems or errors suspected with the meters.</td>
<td>i. See item 2.a.i.</td>
</tr>
<tr>
<td>3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE &gt;500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year</td>
<td>Compliance report</td>
<td>a. The results of the annual compliance demonstration, if conducted during the reporting period.</td>
<td>i. Semiannually according to the requirements in §63.6650(b)(1)-(5).</td>
</tr>
</tbody>
</table>
4. Emergency stationary RICE that operate or are contractually obligated to be available for more than 15 hours per year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operate for the purposes specified in §63.6640(f)(4)(ii) Report a. The information in §63.6650(h)(1) i. annually according to the requirements in §63.6650(h)(2)-(3).

[78 FR 6719, Jan. 30, 2013]

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.

<table>
<thead>
<tr>
<th>General provisions citation</th>
<th>Subject of citation</th>
<th>Applies to subpart</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>§63.1</td>
<td>General applicability of the General Provisions</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.2</td>
<td>Definitions</td>
<td>Yes.</td>
<td>Additional terms defined in §63.6675.</td>
</tr>
<tr>
<td>§63.3</td>
<td>Units and abbreviations</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.4</td>
<td>Prohibited activities and circumvention</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.5</td>
<td>Construction and reconstruction</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(a)</td>
<td>Applicability</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(b)(1)-(4)</td>
<td>Compliance dates for new and reconstructed sources</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(b)(5)</td>
<td>Notification</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(b)(6)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§63.6(b)(7)</td>
<td>Compliance dates for new and reconstructed area sources that become major sources</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(c)(1)-(2)</td>
<td>Compliance dates for existing sources</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(c)(3)-(4)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§63.6(c)(5)</td>
<td>Compliance dates for existing area sources that become major sources</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(d)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§63.6(e)</td>
<td>Operation and maintenance</td>
<td>No.</td>
<td></td>
</tr>
<tr>
<td>§63.6(f)(1)</td>
<td>Applicability of standards</td>
<td>No.</td>
<td></td>
</tr>
<tr>
<td>§63.6(f)(2)</td>
<td>Methods for determining compliance</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(f)(3)</td>
<td>Finding of compliance</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(g)(1)-(3)</td>
<td>Use of alternate standard</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(h)</td>
<td>Opacity and visible emission standards</td>
<td>No Subpart ZZZZ does not contain opacity or visible emission standards.</td>
<td></td>
</tr>
<tr>
<td>§63.6(i)</td>
<td>Compliance extension procedures and criteria</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>General provisions citation</td>
<td>Subject of citation</td>
<td>Applies to subpart</td>
<td>Explanation</td>
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</tr>
<tr>
<td>§63.6(j)</td>
<td>Presidential compliance exemption</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.7(a)(1)-(2)</td>
<td>Performance test dates</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§63.7(a)(3)</td>
<td>CAA section 114 authority</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.7(b)(1)</td>
<td>Notification of performance test</td>
<td>Yes</td>
<td>Except that §63.7(b)(1) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.7(b)(2)</td>
<td>Notification of rescheduling</td>
<td>Yes</td>
<td>Except that §63.7(b)(2) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.7(c)</td>
<td>Quality assurance/test plan</td>
<td>Yes</td>
<td>Except that §63.7(c) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.7(d)</td>
<td>Testing facilities</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.7(e)(1)</td>
<td>Conditions for conducting performance tests</td>
<td>No.</td>
<td>Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.</td>
</tr>
<tr>
<td>§63.7(e)(2)</td>
<td>Conduct of performance tests and reduction of data</td>
<td>Yes</td>
<td>Subpart ZZZZ specifies test methods at §63.6620.</td>
</tr>
<tr>
<td>§63.7(e)(3)</td>
<td>Test run duration</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.7(e)(4)</td>
<td>Administrator may require other testing under section 114 of the CAA</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.7(f)</td>
<td>Alternative test method provisions</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.7(g)</td>
<td>Performance test data analysis, recordkeeping, and reporting</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.7(h)</td>
<td>Waiver of tests</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.8(a)(1)</td>
<td>Applicability of monitoring requirements</td>
<td>Yes</td>
<td>Subpart ZZZZ contains specific requirements for monitoring at §63.6625.</td>
</tr>
<tr>
<td>§63.8(a)(2)</td>
<td>Performance specifications</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.8(a)(3)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§63.8(a)(4)</td>
<td>Monitoring for control devices</td>
<td>No.</td>
<td></td>
</tr>
<tr>
<td>§63.8(b)(1)</td>
<td>Monitoring</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.8(b)(2)-(3)</td>
<td>Multiple effluents and multiple monitoring systems</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.8(c)(1)</td>
<td>Monitoring system operation and maintenance</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.8(c)(1)(i)</td>
<td>Routine and predictable SSM</td>
<td>No.</td>
<td></td>
</tr>
<tr>
<td>§63.8(c)(1)(ii)</td>
<td>SSM not in Startup Shutdown Malfunction Plan</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.8(c)(1)(iii)</td>
<td>Compliance with operation and maintenance</td>
<td>No.</td>
<td></td>
</tr>
<tr>
<td>§63.8(c)(2)-(3)</td>
<td>Monitoring system installation</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.8(c)(4)</td>
<td>Continuous monitoring system (CMS) requirements</td>
<td>Yes</td>
<td>Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).</td>
</tr>
<tr>
<td>§63.8(c)(5)</td>
<td>COMS minimum procedures</td>
<td>No.</td>
<td>Subpart ZZZZ does not require COMS.</td>
</tr>
<tr>
<td>§63.8(c)(6)-(8)</td>
<td>CMS requirements</td>
<td>Yes.</td>
<td>Except that subpart ZZZZ does not require COMS.</td>
</tr>
<tr>
<td>General provisions citation</td>
<td>Subject of citation</td>
<td>Applies to subpart</td>
<td>Explanation</td>
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</tr>
<tr>
<td>§63.8(d)</td>
<td>CMS quality control</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§63.8(e)</td>
<td>CMS performance evaluation</td>
<td>Yes</td>
<td>Except for §63.8(e)(5)(ii), which applies to COMS.</td>
</tr>
<tr>
<td>§63.8(f)(1)-(5)</td>
<td>Alternative monitoring method</td>
<td>Yes</td>
<td>Except that §63.8(f)(4) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.8(f)(6)</td>
<td>Alternative to relative accuracy test</td>
<td>Yes</td>
<td>Except that §63.8(f)(6) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.8(g)</td>
<td>Data reduction</td>
<td>Yes</td>
<td>Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.</td>
</tr>
<tr>
<td>§63.9(a)</td>
<td>Applicability and State delegation of notification requirements</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.9(b)(1)-(5)</td>
<td>Initial notifications</td>
<td>Yes</td>
<td>Except that §63.9(b)(3) is reserved.</td>
</tr>
<tr>
<td>§63.9(c)</td>
<td>Request for compliance extension</td>
<td>Yes</td>
<td>Except that §63.9(c) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.9(d)</td>
<td>Notification of special compliance requirements for new sources</td>
<td>Yes</td>
<td>Except that §63.9(d) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.9(e)</td>
<td>Notification of performance test</td>
<td>Yes</td>
<td>Except that §63.9(e) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.9(f)</td>
<td>Notification of visible emission (VE)/opacity test</td>
<td>No</td>
<td>Subpart ZZZZ does not contain opacity or VE standards.</td>
</tr>
<tr>
<td>§63.9(g)(1)</td>
<td>Notification of performance evaluation</td>
<td>Yes</td>
<td>Except that §63.9(g) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.9(g)(2)</td>
<td>Notification of use of COMS data</td>
<td>No</td>
<td>Subpart ZZZZ does not contain opacity or VE standards.</td>
</tr>
<tr>
<td>§63.9(g)(3)</td>
<td>Notification that criterion for alternative to RATA is exceeded</td>
<td>Yes</td>
<td>If alternative is in use.</td>
</tr>
<tr>
<td>§63.9(h)(1)-(6)</td>
<td>Notification of compliance status</td>
<td>Yes</td>
<td>Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.</td>
</tr>
<tr>
<td>§63.9(i)</td>
<td>Adjustment of submittal deadlines</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.9(j)</td>
<td>Change in previous information</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>General provisions citation</td>
<td>Subject of citation</td>
<td>Applies to subpart</td>
<td>Explanation</td>
</tr>
<tr>
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<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>§63.10(a)</td>
<td>Administrative provisions for recordkeeping/reporting</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.10(b)(1)</td>
<td>Record retention</td>
<td>Yes</td>
<td>Except that the most recent 2 years of data do not have to be retained on site.</td>
</tr>
<tr>
<td>§63.10(b)(2)(i)-(v)</td>
<td>Records related to SSM</td>
<td>No.</td>
<td></td>
</tr>
<tr>
<td>§63.10(b)(2)(vi)-(xi)</td>
<td>Records when under waiver</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.10(b)(2)(xii)</td>
<td>Records when using alternative to RATA</td>
<td>Yes.</td>
<td>For CO standard if using RATA alternative.</td>
</tr>
<tr>
<td>§63.10(b)(2)(xiii)</td>
<td>Records of supporting documentation</td>
<td>Yes.</td>
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<tr>
<td>§63.10(b)(3)</td>
<td>Records of applicability determination</td>
<td>Yes.</td>
<td></td>
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<tr>
<td>§63.10(c)</td>
<td>Additional records for sources using CEMS</td>
<td>Yes.</td>
<td>Except that §63.10(c)(2)-(4) and (9) are reserved.</td>
</tr>
<tr>
<td>§63.10(d)(1)</td>
<td>General reporting requirements</td>
<td>Yes.</td>
<td></td>
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<tr>
<td>§63.10(d)(2)</td>
<td>Report of performance test results</td>
<td>Yes.</td>
<td></td>
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<tr>
<td>§63.10(d)(3)</td>
<td>Reporting opacity or VE observations</td>
<td>No.</td>
<td>Subpart ZZZZ does not contain opacity or VE standards.</td>
</tr>
<tr>
<td>§63.10(d)(4)</td>
<td>Progress reports</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.10(d)(5)</td>
<td>Startup, shutdown, and malfunction reports</td>
<td>No.</td>
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<tr>
<td>§63.10(e)(1) and (2)(i)</td>
<td>Additional CMS Reports</td>
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<td>§63.10(e)(2)(ii)</td>
<td>COMS-related report</td>
<td>No.</td>
<td>Subpart ZZZZ does not require COMS.</td>
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<tr>
<td>§63.10(e)(3)</td>
<td>Excess emission and parameter exceedances reports</td>
<td>Yes.</td>
<td>Except that §63.10(e)(3)(i) (C) is reserved.</td>
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<td>Reporting COMS data</td>
<td>No.</td>
<td>Subpart ZZZZ does not require COMS.</td>
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<td>§63.10(f)</td>
<td>Waiver for recordkeeping/reporting</td>
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<td>§63.11</td>
<td>Flares</td>
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<td>§63.12</td>
<td>State authority and delegations</td>
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<td>§63.13</td>
<td>Addresses</td>
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<td>§63.14</td>
<td>Incorporation by reference</td>
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<tr>
<td>§63.15</td>
<td>Availability of information</td>
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Appendix A—Protocol for Using an Electrochemical Analyzer to Determine Oxygen and Carbon Monoxide Concentrations From Certain Engines

1.0 Scope and Application. What is this Protocol?

This protocol is a procedure for using portable electrochemical (EC) cells for measuring carbon monoxide (CO) and oxygen (O₂) concentrations in controlled and uncontrolled emissions from existing stationary 4-stroke lean burn and 4-stroke rich burn reciprocating internal combustion engines as specified in the applicable rule.

1.1 Analytes. What does this protocol determine?

This protocol measures the engine exhaust gas concentrations of carbon monoxide (CO) and oxygen (O₂).

<table>
<thead>
<tr>
<th>Analyte</th>
<th>CAS No.</th>
<th>Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon monoxide (CO)</td>
<td>630-08-0</td>
<td>Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.</td>
</tr>
<tr>
<td>Oxygen (O₂)</td>
<td>7782-44-7</td>
<td></td>
</tr>
</tbody>
</table>

1.2 Applicability. When is this protocol acceptable?

This protocol is applicable to 40 CFR part 63, subpart ZZZZ. Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

1.3 Data Quality Objectives. How good must my collected data be?

Refer to Section 13 to verify and document acceptable analyzer performance.

1.4 Range. What is the targeted analytical range for this protocol?

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and O₂, or no more than twice the permitted CO level.

1.5 Sensitivity. What minimum detectable limit will this protocol yield for a particular gas component?

The minimum detectable limit depends on the nominal range and resolution of the specific EC cell used, and the signal to noise ratio of the measurement system. The minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.

2.0 Summary of Protocol

In this protocol, a gas sample is extracted from an engine exhaust system and then conveyed to a portable EC analyzer for measurement of CO and O₂ gas concentrations. This method provides measurement system performance specifications and sampling protocols to ensure reliable data. You may use additions to, or modifications of vendor supplied measurement systems (e.g., heated or unheated sample lines, thermocouples, flow meters, selective gas scrubbers, etc.) to meet the design specifications of this protocol. Do not make changes to the measurement system from the as-verified configuration (Section 3.12).

3.0 Definitions

3.1 Measurement System. The total equipment required for the measurement of CO and O₂ concentrations. The measurement system consists of the following major subsystems:
3.1.1 **Data Recorder.** A strip chart recorder, computer or digital recorder for logging measurement data from the analyzer output. You may record measurement data from the digital data display manually or electronically.

3.1.2 **Electrochemical (EC) Cell.** A device, similar to a fuel cell, used to sense the presence of a specific analyte and generate an electrical current output proportional to the analyte concentration.

3.1.3 **Interference Gas Scrubber.** A device used to remove or neutralize chemical compounds that may interfere with the selective operation of an EC cell.

3.1.4 **Moisture Removal System.** Any device used to reduce the concentration of moisture in the sample stream so as to protect the EC cells from the damaging effects of condensation and to minimize errors in measurements caused by the scrubbing of soluble gases.

3.1.5 **Sample Interface.** The portion of the system used for one or more of the following: sample acquisition; sample transport; sample conditioning or protection of the EC cell from any degrading effects of the engine exhaust effluent; removal of particulate matter and condensed moisture.

3.2 **Nominal Range.** The range of analyte concentrations over which each EC cell is operated (normally 25 percent to 150 percent of up-scale calibration gas value). Several nominal ranges can be used for any given cell so long as the calibration and repeatability checks for that range remain within specifications.

3.3 **Calibration Gas.** A vendor certified concentration of a specific analyte in an appropriate balance gas.

3.4 **Zero Calibration Error.** The analyte concentration output exhibited by the EC cell in response to zero-level calibration gas.

3.5 **Up-Scale Calibration Error.** The mean of the difference between the analyte concentration exhibited by the EC cell and the certified concentration of the up-scale calibration gas.

3.6 **Interference Check.** A procedure for quantifying analytical interference from components in the engine exhaust gas other than the targeted analytes.

3.7 **Repeatability Check.** A protocol for demonstrating that an EC cell operated over a given nominal analyte concentration range provides a stable and consistent response and is not significantly affected by repeated exposure to that gas.

3.8 **Sample Flow Rate.** The flow rate of the gas sample as it passes through the EC cell. In some situations, EC cells can experience drift with changes in flow rate. The flow rate must be monitored and documented during all phases of a sampling run.

3.9 **Sampling Run.** A timed three-phase event whereby an EC cell's response rises and plateaus in a sample conditioning phase, remains relatively constant during a measurement data phase, then declines during a refresh phase. The sample conditioning phase exposes the EC cell to the gas sample for a length of time sufficient to reach a constant response. The measurement data phase is the time interval during which gas sample measurements can be made that meet the acceptance criteria of this protocol. The refresh phase then purges the EC cells with CO-free air. The refresh phase replenishes requisite O₂ and moisture in the electrolyte reserve and provides a mechanism to degas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre-sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

3.10 **Sampling Day.** A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

3.11 **Pre-Sampling Calibration/Post-Sampling Calibration Check.** The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.
3.12 Performance-Established Configuration. The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

4.0 Interferences.

When present in sufficient concentrations, NO and NO\textsubscript{2} are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

5.0 Safety. [Reserved]

6.0 Equipment and Supplies.

6.1 What equipment do I need for the measurement system?

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

6.2 Measurement System Components.

6.2.1 Sample Probe. A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

6.2.2 Sample Line. Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

6.2.3 Calibration Assembly (optional). A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

6.2.4 Particulate Filter (optional). Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

6.2.5 Sample Pump. A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.8 Sample Flow Rate Monitoring. An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

6.2.9 Sample Gas Manifold (optional). A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.10 EC cell. A device containing one or more EC cells to determine the CO and O\textsubscript{2} concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

6.2.11 Data Recorder. A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for O\textsubscript{2}; and one degree (either °C or °F) for temperature. Alternatively, you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.
6.2.12 Interference Gas Filter or Scrubber. A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

7.0 Reagents and Standards. What calibration gases are needed?

7.1 Calibration Gases. CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and O₂. Use CO calibration gases with labeled concentration values certified by the manufacturer to be within ±5 percent of the label value. Dry ambient air (20.9 percent O₂) is acceptable for calibration of the O₂ cell. If needed, any lower percentage O₂ calibration gas must be a mixture of O₂ in nitrogen.

7.1.1 Up-Scale CO Calibration Gas Concentration. Choose one or more up-scale gas concentrations such that the average of the stack gas measurements for each stack gas sampling run are between 25 and 150 percent of those concentrations. Alternatively, choose an up-scale gas that does not exceed twice the concentration of the applicable outlet standard. If a measured gas value exceeds 150 percent of the up-scale CO calibration gas value at any time during the stack gas sampling run, the run must be discarded and repeated.

7.1.2 Up-Scale O₂ Calibration Gas Concentration.

Select an O₂ gas concentration such that the difference between the gas concentration and the average stack gas measurement or reading for each sample run is less than 15 percent O₂. When the average exhaust gas O₂ readings are above 6 percent, you may use dry ambient air (20.9 percent O₂) for the up-scale O₂ calibration gas.

7.1.3 Zero Gas. Use an inert gas that contains less than 0.25 percent of the up-scale CO calibration gas concentration. You may use dry air that is free from ambient CO and other combustion gas products (e.g., CO₂).

8.0 Sample Collection and Analysis

8.1 Selection of Sampling Sites.

8.1.1 Control Device Inlet. Select a sampling site sufficiently downstream of the engine so that the combustion gases should be well mixed. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.1.2 Exhaust Gas Outlet. Select a sampling site located at least two stack diameters downstream of any disturbance (e.g., turbocharger exhaust, crossover junction or recirculation take-off) and at least one-half stack diameter upstream of the gas discharge to the atmosphere. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.2 Stack Gas Collection and Analysis. Prior to the first stack gas sampling run, conduct the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the “sample conditioning phase” once per minute until constant readings are obtained. Then begin the “measurement data phase” and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the “refresh phase” by introducing dry air, free from CO and other combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the “measurement data phase” readings to calculate the average stack gas CO and O₂ concentrations.

8.3 EC Cell Rate. Maintain the EC cell sample flow rate so that it does not vary by more than ±10 percent throughout the pre-sampling calibration, stack gas sampling and post-sampling calibration check. Alternatively, the EC cell sample flow rate can be maintained within a tolerance range that does not affect the gas concentration readings by more than ±3 percent, as instructed by the EC cell manufacturer.

9.0 Quality Control (Reserved)
10.0 Calibration and Standardization

10.1 Pre-Sampling Calibration. Conduct the following protocol once for each nominal range to be used on each EC cell before performing a stack gas sampling run on each field sampling day. Repeat the calibration if you replace an EC cell before completing all of the sampling runs. There is no prescribed order for calibration of the EC cells; however, each cell must complete the measurement data phase during calibration. Assemble the measurement system by following the manufacturer's recommended protocols including for preparing and preconditioning the EC cell. Assure the measurement system has no leaks and verify the gas scrubbing agent is not depleted. Use Figure 1 to record all data.

10.1.1 Zero Calibration. For both the O2 and CO cells, introduce zero gas to the measurement system (e.g., at the calibration assembly) and record the concentration reading every minute until readings are constant for at least two consecutive minutes. Include the time and sample flow rate. Repeat the steps in this section at least once to verify the zero calibration for each component gas.

10.1.2 Zero Calibration Tolerance. For each zero gas introduction, the zero level output must be less than or equal to ±3 percent of the up-scale gas value or ±1 ppm, whichever is less restrictive, for the CO channel and less than or equal to ±0.3 percent O2 for the O2 channel.

10.1.3 Up-Scale Calibration. Individually introduce each calibration gas to the measurement system (e.g., at the calibration assembly) and record the start time. Record all EC cell output responses and the flow rate during this “sample conditioning phase” once per minute until readings are constant for at least two minutes. Then begin the “measurement data phase” and record readings every 15 seconds for a total of two minutes, or as otherwise required. Finally, perform the “refresh phase” by introducing dry air, free from CO and other combustion gases, until readings are constant for at least two consecutive minutes. Then repeat the steps in this section at least once to verify the calibration for each component gas. Introduce all gases to flow through the entire sample handling system (i.e., at the exit end of the sampling probe or the calibration assembly).

10.1.4 Up-Scale Calibration Error. The mean of the difference of the “measurement data phase” readings from the reported standard gas value must be less than or equal to ±5 percent or ±1 ppm for CO or ±0.5 percent O2, whichever is less restrictive, respectively. The maximum allowable deviation from the mean measured value of any single “measurement data phase” reading must be less than or equal to ±2 percent or ±1 ppm for CO or ±0.5 percent O2, whichever is less restrictive, respectively.

10.2 Post-Sampling Calibration Check. Conduct a stack gas post-sampling calibration check after the stack gas sampling run or set of runs and within 12 hours of the initial calibration. Conduct up-scale and zero calibration checks using the protocol in Section 10.1. Make no changes to the sampling system or EC cell calibration until all post-sampling calibration checks have been recorded. If either the zero or up-scale calibration error exceeds the respective specification in Sections 10.1.2 and 10.1.4 then all measurement data collected since the previous successful calibrations are invalid and re-calibration and re-sampling are required. If the sampling system is disassembled or the EC cell calibration is adjusted, repeat the calibration check before conducting the next analyzer sampling run.

11.0 Analytical Procedure

The analytical procedure is fully discussed in Section 8.

12.0 Calculations and Data Analysis

Determine the CO and O2 concentrations for each stack gas sampling run by calculating the mean gas concentrations of the data recorded during the “measurement data phase”.

13.0 Protocol Performance

Use the following protocols to verify consistent analyzer performance during each field sampling day.

13.1 Measurement Data Phase Performance Check. Calculate the mean of the readings from the “measurement data phase”. The maximum allowable deviation from the mean for each of the individual readings is ±2 percent, or ±1 ppm,
whichever is less restrictive. Record the mean value and maximum deviation for each gas monitored. Data must conform to Section 10.1.4. The EC cell flow rate must conform to the specification in Section 8.3.

*Example:* A measurement data phase is invalid if the maximum deviation of any single reading comprising that mean is greater than ±2 percent or ±1 ppm (the default criteria). For example, if the mean = 30 ppm, single readings of below 29 ppm and above 31 ppm are disallowed.

**13.2 Interference Check.** Before the initial use of the EC cell and interference gas scrubber in the field, and semi-annually thereafter, challenge the interference gas scrubber with NO and NO2 gas standards that are generally recognized as representative of diesel-fueled engine NO and NO2 emission values. Record the responses displayed by the CO EC cell and other pertinent data on Figure 1 or a similar form.

**13.2.1 Interference Response.** The combined NO and NO2 interference response should be less than or equal to ±5 percent of the up-scale CO calibration gas concentration.

**13.3 Repeatability Check.** Conduct the following check once for each nominal range that is to be used on the CO EC cell within 5 days prior to each field sampling program. If a field sampling program lasts longer than 5 days, repeat this check every 5 days. Immediately repeat the check if the EC cell is replaced or if the EC cell is exposed to gas concentrations greater than 150 percent of the highest up-scale gas concentration.

**13.3.1 Repeatability Check Procedure.** Perform a complete EC cell sampling run (all three phases) by introducing the CO calibration gas to the measurement system and record the response. Follow Section 10.1.3. Use Figure 1 to record all data. Repeat the run three times for a total of four complete runs. During the four repeatability check runs, do not adjust the system except where necessary to achieve the correct calibration gas flow rate at the analyzer.

**13.3.2 Repeatability Check Calculations.** Determine the highest and lowest average “measurement data phase” CO concentrations from the four repeatability check runs and record the results on Figure 1 or a similar form. The absolute value of the difference between the maximum and minimum average values recorded must not vary more than ±3 percent or ±1 ppm of the up-scale gas value, whichever is less restrictive.

**14.0 Pollution Prevention (Reserved)**

**15.0 Waste Management (Reserved)**

**16.0 Alternative Procedures (Reserved)**

**17.0 References**


Table 1: Appendix A—Sampling Run Data.

<table>
<thead>
<tr>
<th>Facility</th>
<th>Engine I.D.</th>
<th>Date</th>
<th>Run Type:</th>
<th>Pre-Sample Calibration</th>
<th>Stack Gas Sample</th>
<th>Post-Sample Cal. Check</th>
<th>Repeatability Check</th>
<th>Time</th>
<th>Scrub. OK</th>
<th>Flow-Rate</th>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(X)</td>
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<tr>
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<td>2</td>
<td>3</td>
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<td>O₂</td>
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<td>Measurement Data Phase</td>
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<tr>
<td>Refresh Phase</td>
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</tr>
</tbody>
</table>

[78 FR 6721, Jan. 30, 2013]
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 (6) 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 are modified or reconstructed after June 12, 2006, and any person that modifies or reconstructs any stationary SI ICE after June 12, 2006.

(6) The provisions of §60.4236 of this subpart are applicable to all owners and operators of stationary SI ICE that commence construction 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.

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37972, June 28, 2011]

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:

<table>
<thead>
<tr>
<th>If engine displacement is * * * and manufacturing dates are * * *</th>
<th>the engine must meet emission standards and related requirements for nonhandheld engines under * * *</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) below 225 cc July 1, 2008 to December 31, 2011</td>
<td>40 CFR part 90.</td>
</tr>
<tr>
<td>(2) below 225 cc January 1, 2012 or later</td>
<td>40 CFR part 1054.</td>
</tr>
<tr>
<td>(3) at or above 225 cc July 1, 2008 to December 31, 2010</td>
<td>40 CFR part 90.</td>
</tr>
<tr>
<td>(4) at or above 225 cc January 1, 2011 or later</td>
<td>40 CFR part 1054.</td>
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</tbody>
</table>
(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 25 HP and less than 130 HP that use gasoline and that are 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) that use gasoline 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 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)(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 cc that are rich burn engines that use LPG to the certification emission standards and other requirements for new nonroad 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 (except gasoline and rich burn engines that use LPG), 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 (except gasoline and rich burn engines that use LPG) 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 certification 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 that are not severe duty engines.

(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.
(g) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary SI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed stationary SI ICE.


§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 was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the 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 emission standards in §60.4231(a) for their stationary SI ICE. Engines with a date of manufacture prior to July 1, 2008 must comply with the emission standards specified in §60.4231(a) applicable to engines manufactured on July 1, 2008.
(2) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline engines and are modified or reconstructed after June 12, 2006, must comply with the emission standards in §60.4231(b) for their stationary SI ICE. Engines with a date of manufacture prior to July 1, 2008 (or January 1, 2009 for emergency engines) must comply with the emission standards specified in §60.4231(b) applicable to engines manufactured on July 1, 2008 (or January 1, 2009 for emergency engines).

(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 §60.4231(c). Engines with a date of manufacture prior to July 1, 2008 (or January 1, 2009 for emergency engines) must comply with the emission standards specified in §60.4231(c) applicable to engines manufactured on July 1, 2008 (or January 1, 2009 for emergency engines).

(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 (NOx) 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 NOx 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 for non-emergency engines less than 100 HP), and a VOC emission standard of 86 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 (except lean burn natural gas engines and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 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;

(iv) Prior to January 1, 2008, for non-emergency lean burn natural gas engines and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP.

(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. Engines with maximum engine power less than 500 HP and a date of manufacture prior to July 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE with a maximum engine power less than 500 HP manufactured on July 1, 2008. Engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP manufactured on July 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP manufactured on July 1, 2007. Lean burn engines greater than or equal to 500 HP and less than 1,350 HP with a date of manufacture prior to January 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE that are lean burn engines greater than or equal to 500 HP and less than 1,350 HP and manufactured on January 1, 2008.

(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 previous model years?

(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

§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 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]

§60.4240 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 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 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


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 8178-4:1996(E) (incorporated by reference, see 40 CFR 60.17) or the test cycle requirements specified in Table 3 to 40 CFR 1048.505, except that Table 3 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 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 pipeline-quality 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 pipeline-quality 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.


§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 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 at 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. 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. 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.

(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) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (d)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (d)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (d)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (d)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (d)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (d)(2) of this section. Except as provided in paragraph (d)(3)(i) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;
(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]

(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 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 a 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.

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

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in §60.4233(f), as applicable.
(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in §60.4244. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.


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 NOx mass per unit output emission limitation, convert the concentration of NOx in the engine exhaust using Equation 1 of this section:

\[
ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{\text{HP-hr}}
\]

Where:

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

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

1.912 \times 10^{-3} = Conversion constant for ppm NOx to 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:
Where:

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

Cd = Measured CO concentration in ppmv.

\[ 1.164 \times 10^{-3} \] = 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:

\[
ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{\text{HP-hr}} \quad \text{(Eq. 3)}
\]

Where:

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

Cd = VOC concentration measured as propane in ppmv.

\[ 1.833 \times 10^{-3} \] = 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.

\[
RF_i = \frac{C_{Mi}}{C_{Ai}} \quad \text{(Eq. 4)}
\]
Where:

\[ RF_i = \text{Response factor of compound } i \text{ when measured with EPA Method 25A}. \]

\[ CM_i = \text{Measured concentration of compound } i \text{ in ppmv as carbon}. \]

\[ CA_i = \text{True concentration of compound } i \text{ in ppmv as carbon}. \]

\[ C_{icorr} = RF_i \times C_{imeas} \quad \text{(Eq. 5)} \]

Where:

\[ C_{icorr} = \text{Concentration of compound } i \text{ corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon}. \]

\[ C_{imeas} = \text{Concentration of compound } i \text{ measured by EPA Method 320, ppmv as carbon}. \]

\[ C_{peq} = 0.6098 \times C_{icorr} \quad \text{(Eq. 6)} \]

Where:

\[ C_{peq} = \text{Concentration of compound } i \text{ in mg of propane equivalent per DSCM}. \]

**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. 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. Performance test reports using EPA Method 18, EPA Method 320, or ASTM D6348-03 (incorporated by reference—see 40 CFR 60.17) to measure VOC require reporting of all QA/QC data. For Method 18, report results from sections 8.4 and 11.1.1.4; for Method 320, report results from sections 8.6.2, 9.0, and 13.0; and for ASTM D6348-03 report results of all QA/QC procedures in Annexes 1-7.

(e) If you own or operate an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §60.4243(d)(2)(ii) and (iii) or that operates for the purposes specified in §60.4243(d)(3)(i), you must submit an annual report according to the requirements in paragraphs (e)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

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

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §60.4243(d)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4243(d)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §60.4243(d)(2)(ii) and (iii).

(vii) Hours spent for operation for the purposes specified in §60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4243(d)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.
(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §60.4. [73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59177, Oct. 8, 2008; 78 FR 6697, Jan. 30, 2013; 81 FR 59809, Aug. 30, 2016]

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 1060 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 at 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 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. You may request in your application for certification that we approve a shorter certified emissions life for an engine family. We may approve a shorter certified emissions life, in hours of engine operation but not in years, if we determine that these engines will rarely operate longer than the shorter certified emissions life. If engines identical to those in the engine family have already been produced and are in use, your demonstration must include documentation from such in-use
engines. In other cases, your demonstration must include an engineering analysis of information equivalent to such in-use data, such as data from research engines or similar engine models that are already in production. Your demonstration must also include any overhaul interval that you recommend, any mechanical warranty that you offer for the engine or its components, and any relevant customer design specifications. Your demonstration may include any other relevant information. The certified emissions life value may not be shorter than any of the following:

(i) 1,000 hours of operation.

(ii) Your recommended overhaul interval.

(iii) Your mechanical warranty for the engine.

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.

Date of manufacture means one of the following things:

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

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

(3) Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

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 ($\text{CO}_2$).

Emergency stationary internal combustion engine means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in §60.4243(d) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in §60.4243(d), then it is not considered to be an emergency stationary ICE under this subpart.

(1) The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. 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.
(2) The stationary ICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §60.4243(d).

(3) The stationary ICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §60.4243(d)(2)(ii) or (iii) and §60.4243(d)(3)(i).

**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.

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

**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.

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

**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 or 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 the calendar year in which an engine is manufactured (see “date of manufacture”), except as follows:

(1) Model year means the annual new model production period of the engine manufacturer in which an engine is manufactured (see “date of manufacture”), if the annual new model production period is different than the calendar year and includes 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.

(2) 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 manufactured (see “date of manufacture”).

**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.

**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 NOX (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, aircraft, 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 40 CFR part 63, subpart PPPPPP, that tests 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.

Table 1 to Subpart JJJJ of Part 60—NOx, 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

<table>
<thead>
<tr>
<th>Engine type and fuel</th>
<th>Maximum engine power</th>
<th>Manufacture date</th>
<th>Emission standards&lt;sup&gt;a&lt;/sup&gt;</th>
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<td></td>
<td>NOx g/HP-hr</td>
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<tr>
<td>Non-Emergency SI Natural Gas&lt;sup&gt;b&lt;/sup&gt; and Non-Emergency SI Lean Burn LPG&lt;sup&gt;c&lt;/sup&gt;</td>
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<tr>
<td>Landfill/Digester Gas Lean Burn</td>
<td>500≤HP&lt;1,350</td>
<td>1/1/2008</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7/1/2010</td>
<td>2.0</td>
</tr>
<tr>
<td>Emergency</td>
<td>25&lt;HP&lt;130</td>
<td>1/1/2009</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>HP≥130</td>
<td>2.0</td>
<td>4.0</td>
</tr>
</tbody>
</table>

<sup>a</sup>Owners 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.

<sup>b</sup>Owners 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.

<sup>c</sup>The emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NOX + HC.

<sup>d</sup>For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

[76 FR 37975, June 28, 2011]
Table 2 to Subpart JJJJ of Part 60—Requirements for Performance Tests

<table>
<thead>
<tr>
<th>For each</th>
<th>Complying with the requirement to</th>
<th>You must</th>
<th>Using</th>
<th>According to the following requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Stationary SI internal combustion engine demonstrating compliance according to §60.4244</td>
<td>a. limit the concentration of NOX in the stationary SI internal combustion engine exhaust</td>
<td>i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;</td>
<td>(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate</td>
<td>(a) Alternatively, for NOX, O₂, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts &gt;6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (‘3-point long line’). If the duct is &gt;12 inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, Appendix A, the duct may be sampled at ‘3-point long line’; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, Appendix A.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(b) Measurements to determine O₂ concentration must be made at the same time as the measurements for NOX concentration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(2) Method 3, 3A, or 3B² of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005)³⁴</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(3) Method 2 or 2C of 40 CFR part 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A⁵, or ASTM Method D6348-03⁶⁷</td>
<td>(c) Measurements to determine moisture must be made at the same time as the measurement for NOX concentration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Determine the O₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii. If necessary, determine the exhaust flow rate of the stationary internal combustion engine exhaust;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For each</td>
<td>Complying with the requirement to</td>
<td>You must</td>
<td>Using</td>
<td>According to the following requirements</td>
</tr>
<tr>
<td>----------</td>
<td>----------------------------------</td>
<td>----------</td>
<td>-------</td>
<td>-----------------------------------------</td>
</tr>
<tr>
<td>v.</td>
<td>Measure NO\textsubscript{x} at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device</td>
<td>(5) Method 7E of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (Reapproved 2005)\textsuperscript{ad}, Method 320 of 40 CFR part 63, appendix A\textsuperscript{a}, or ASTM Method D6348-03\textsuperscript{de}</td>
<td>(d) Results of this test consist of the average of the three 1-hour or longer runs.</td>
<td></td>
</tr>
<tr>
<td>b. limit the concentration of CO in the stationary SI internal combustion engine exhaust</td>
<td>i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;</td>
<td>(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate</td>
<td>(a) Alternatively, for CO, O\textsubscript{2}, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts &gt;6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is &gt;12 inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, Appendix A, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, Appendix A.</td>
<td></td>
</tr>
<tr>
<td>ii. Determine the O\textsubscript{2} concentration of the stationary internal combustion engine exhaust at the sampling port location;</td>
<td>(2) Method 3, 3A, or 3B\textsuperscript{b} of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005)\textsuperscript{ad}</td>
<td>(b) Measurements to determine O\textsubscript{2} concentration must be made at the same time as the measurements for CO concentration.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;</td>
<td>(3) Method 2 or 2C of 40 CFR 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7</td>
<td>(c) Measurements to determine moisture must be made at the same time as the measurement for CO concentration.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and</td>
<td>(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A\textsuperscript{a}, or ASTM Method D6348-03\textsuperscript{de}</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
For each requirement to comply with, you must use the following methods:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Method/Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure CO at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device</td>
<td>(5) Method 10 of 40 CFR part 60, appendix A4, ASTM Method D6522-00 (Reapproved 2005)</td>
</tr>
<tr>
<td>Results of this test consist of the average of the three 1-hour or longer runs.</td>
<td></td>
</tr>
<tr>
<td>Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;</td>
<td>(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate</td>
</tr>
<tr>
<td>Alternatively, for VOC, O₂, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts &gt;6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is &gt;12 inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, Appendix A, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, Appendix A.</td>
<td>(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005)</td>
</tr>
<tr>
<td>Determine the O₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;</td>
<td>(b) Measurements to determine O₂ concentration must be made at the same time as the measurements for VOC concentration.</td>
</tr>
<tr>
<td>If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;</td>
<td>(3) Method 2 or 2C of 40 CFR 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7</td>
</tr>
<tr>
<td>If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location;</td>
<td>(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A&quot;, or ASTM Method D6348-03de</td>
</tr>
<tr>
<td>(c) Measurements to determine moisture must be made at the same time as the measurement for VOC concentration.</td>
<td></td>
</tr>
</tbody>
</table>
For each requirement to comply with the requirement to measure VOC at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device.


(d) Results of this test consist of the average of the three 1-hour or longer runs.

*Also, you may petition the Administrator for approval to use alternative methods for portable analyzer.

You may use ASME PTC 19.10-1981, Flue and Exhaust Gas Analyses, for measuring the O₂ content of the exhaust gas as an alternative to EPA Method 3B. AMSE PTC 19.10-1981 incorporated by reference, see 40 CFR 60.17.

You may use EPA Method 18 of 40 CFR part 60, appendix A-6, provided that you conduct an adequate pre-survey 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).

Incorporated by reference; see 40 CFR 60.17.

You must meet the requirements in §60.4245(d).

[81 FR 59809, Aug. 30, 2016]

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]

<table>
<thead>
<tr>
<th>General provisions citation</th>
<th>Subject of citation</th>
<th>Applies to subpart</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>§60.1 General applicability of the General Provisions</td>
<td>Yes</td>
<td>Additional terms defined in §60.4248.</td>
<td></td>
</tr>
<tr>
<td>§60.2 Definitions</td>
<td>Yes</td>
<td>Additional terms defined in §60.4248.</td>
<td></td>
</tr>
<tr>
<td>§60.3 Units and abbreviations</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§60.4 Address</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§60.5 Determination of construction or modification</td>
<td>Yes</td>
<td>Except that §60.7 only applies as specified in §60.4245.</td>
<td></td>
</tr>
<tr>
<td>§60.6 Review of plans</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§60.7 Notification and Recordkeeping</td>
<td>Yes</td>
<td>Except that §60.8 only applies to owners and operators who are subject to performance testing in subpart JJJJ.</td>
<td></td>
</tr>
</tbody>
</table>
### 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.

<table>
<thead>
<tr>
<th>Mobile source provisions citation</th>
<th>Subject of citation</th>
<th>Applies to subpart</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1048 subpart A</td>
<td>Overview and Applicability</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>1048 subpart B</td>
<td>Emission Standards and Related Requirements</td>
<td>Yes</td>
<td>Except for the specific sections below.</td>
</tr>
<tr>
<td>1048.101</td>
<td>Exhaust Emission Standards</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>1048.105</td>
<td>Evaporative Emission Standards</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>1048.110</td>
<td>Diagnosing Malfunctions</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>1048.140</td>
<td>Certifying Blue Sky Series Engines</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>1048.145</td>
<td>Interim Provisions</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>1048 subpart C</td>
<td>Certifying Engine Families</td>
<td>Yes</td>
<td>Except for the specific sections below.</td>
</tr>
<tr>
<td>1048.205(b)</td>
<td>AECD reporting</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>1048.205(c)</td>
<td>OBD Requirements</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>1048.205(n)</td>
<td>Deterioration Factors</td>
<td>Yes</td>
<td>Except as indicated in 60.4247(c).</td>
</tr>
<tr>
<td>1048.205(p)(1)</td>
<td>Deterioration Factor Discussion</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Mobile source provisions citation</td>
<td>Subject of citation</td>
<td>Applies to subpart</td>
<td>Explanation</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----------------------------------------------------------</td>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1048.205(p)(2)</td>
<td>Liquid Fuels as they require</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>1048.240(b)(c)(d)</td>
<td>Deterioration Factors</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>1048 subpart D</td>
<td>Testing Production-Line Engines</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>1048 subpart E</td>
<td>Testing In-Use Engines</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>1048 subpart F</td>
<td>Test Procedures</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>1065.5(a)(4)</td>
<td>Raw sampling (refers reader back to the specific emissions regulation for guidance)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>1048 subpart G</td>
<td>Compliance Provisions</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>1048 subpart H</td>
<td>Reserved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1048 subpart I</td>
<td>Definitions and Other Reference Information</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>1048 appendix I and II</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1065 (all subparts)</td>
<td>Engine Testing Procedures</td>
<td>Yes</td>
<td>Except for the specific section below.</td>
</tr>
<tr>
<td>1065.715</td>
<td>Test Fuel Specifications for Natural Gas</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>1068 (all subparts)</td>
<td>General Compliance Provisions for Nonroad Programs</td>
<td>Yes</td>
<td>Except for the specific sections below.</td>
</tr>
<tr>
<td>1068.245</td>
<td>Hardship Provisions for Unusual Circumstances</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>1068.250</td>
<td>Hardship Provisions for Small-Volume Manufacturers</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>1068.255</td>
<td>Hardship Provisions for Equipment Manufacturers and Secondary Engine Manufacturers</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>
Source Description and Location

Source Name: Allison Transmission, Inc. - Speedway Main Campus
Source Location: One Allison Way, Indianapolis, Indiana 46222
County: Marion County, Wayne Township
SIC Code: 3714 (Motor Vehicle Parts and Accessories)
Significant Source Modification No.: 097-41322-00310
Permit Renewal No.: T097-41349-00310
Permit Reviewer: Mehul Sura

On April 10, 2019, Allison Transmission, Inc. - Speedway Main Campus submitted an application to the Office of Air Quality (OAQ) requesting to renew its operating permit. OAQ has reviewed the operating permit renewal application from Allison Transmission, Inc. - Speedway Main Campus relating to the operation of a stationary transmission manufacturing plant. Allison Transmission, Inc. - Speedway Main Campus was issued its second Part 70 Operating Permit Renewal (T097-34667-00310) on February 24, 2015.

Source Definition

This transmission manufacturing plant consists of six (6) plants, including Plant 3, Plant 4, Plant 6, Plant 12, Plant 14, and Plant 16, located at One Allison Way, Indianapolis, Indiana 46222.

The six (6) plants are located on contiguous or adjacent properties and have the same two digit SIC code and are still under common ownership. Therefore they are considered one (1) major source, as defined by 326 IAC 2-7-1(22).

This conclusion was initially determined under Part 70 Operating Permit T097-6898-00310 on June 21, 2004 and was updated under Significant Source Modification 097-36831-00310 to correct typographical errors and to incorporate an address change.

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. T097-34667-00310 on February 24, 2015. The source has since received the following approvals:

(a) Administrative Amendment No. 097-36225-00310, issued on October 6, 2015.
(b) Significant Source Modification No. 097-36831-00310, issued on October 4, 2016.
(c) Significant Permit Modification No. 097-36910-00310, issued on October 21, 2016.
(d) Administrative Amendment No. 097-38227-00310, issued on March 8, 2017.
(e) Minor Source Modification No. 097-38679-00310, issued on September 29, 2017.
(f) Significant Permit Modification No. 097-38683-00310, issued on December 4, 2017.
(g) Minor Source Modification No. 097-39755-00310, issued on May 17, 2018.
(h) Significant Permit Modification No.: 097-39778-00310, issued on July 17, 2018.

(i) Significant Permit Modification No.: 097-39705-00310, issued on October 02, 2018

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

### Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

(a) One (1) Union Iron Works Boiler, identified as emission unit BLR 4, capable of combusting only natural gas, with a maximum capacity of seventy two (72) million British thermal units (MMBtu) Btu per hour, exhausting out one stack identified as stack ID# 3107 and constructed in 1953.

(b) One (1) Union Iron Works Boiler, identified as emission unit BLR 5, capable of combusting only natural gas, with a maximum capacity of ninety six (96) million British thermal units (MMBtu) Btu per hour, exhausting out one stack identified as stack ID# 3108 and constructed in 1969.

(c) Emission Unit ETC consists of the following twenty five (25) engineering development transmission test cells; 701, 704, 705, 706, 707, 709, 710, 711, 712, 32N, 32S, 38N, 39N, 39S, 41N, 41S, 48N, 48S, 49N, 49S, 50N, 50S, 51N, 52N and 52S. The table below lists the fuel type and engine type that each cell is capable of accommodating based on the physical characteristics of each cell. Test cell 704 utilizes an oxidation catalyst system to control CO emissions.

<table>
<thead>
<tr>
<th>Test Cell ID</th>
<th>Construction Dates</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>Stack ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>701</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating or Gas Turbine</td>
<td>4000</td>
<td>PTE 057</td>
</tr>
<tr>
<td>704</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 065</td>
</tr>
<tr>
<td>705</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating or Gas Turbine</td>
<td>2400 for reciprocating; 4000 for gas turbine</td>
<td>PTE 067</td>
</tr>
<tr>
<td>706</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>4000</td>
<td>PTE 069</td>
</tr>
<tr>
<td>707</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 071</td>
</tr>
<tr>
<td>709</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 075</td>
</tr>
<tr>
<td>710</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 077</td>
</tr>
<tr>
<td>711</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 079</td>
</tr>
<tr>
<td>712</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 080</td>
</tr>
<tr>
<td>32N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 008</td>
</tr>
<tr>
<td>32S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 006</td>
</tr>
<tr>
<td>Test Cell ID</td>
<td>Construction Dates</td>
<td>Fuel Type</td>
<td>Engine Type</td>
<td>Estimated Maximum Engine Size in Horsepower</td>
<td>Stack ID</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------</td>
<td>------------------------------------</td>
<td>---------------</td>
<td>---------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>38N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>4000</td>
<td>PTE 011</td>
</tr>
<tr>
<td>39N</td>
<td>prior 1977 modified 1980's</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>2400</td>
<td>PTE 018</td>
</tr>
<tr>
<td>39S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 020</td>
</tr>
<tr>
<td>41N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 023</td>
</tr>
<tr>
<td>41S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 021</td>
</tr>
<tr>
<td>48N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 040</td>
</tr>
<tr>
<td>48S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 041</td>
</tr>
<tr>
<td>49N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 086</td>
</tr>
<tr>
<td>49S</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1500</td>
<td>PTE 087</td>
</tr>
<tr>
<td>50N</td>
<td>2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 700 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 093</td>
</tr>
<tr>
<td>50S</td>
<td>2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 1000 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 097</td>
</tr>
<tr>
<td>51N</td>
<td>prior 1977</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 084</td>
</tr>
<tr>
<td>52N</td>
<td>2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 700 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 098</td>
</tr>
<tr>
<td>52S</td>
<td>2016</td>
<td>Gasoline, Low Sulfur Diesel (150 ppm Sulfur), Natural Gas</td>
<td>Reciprocating</td>
<td>Diesel - 1000 HP Gasoline - 650 HP Natural Gas - 650 HP</td>
<td>PTE 099</td>
</tr>
</tbody>
</table>

All of the engines except gas turbine engines located in Test Cells 701 and 705 are affected sources under 40 CFR 63, Subpart ZZZZ. Any gas turbine engines in test cells 701 and 705 are considered affected sources under 40 CFR 60, Subpart KKKK when a new turbine is installed in the test cell and a test cell exemption does not apply. The diesel reciprocating engines in each of the test cells are considered affected sources under 40 CFR 60, Subpart IIII when a new diesel engine is installed in the test cell and a test cell exemption does not apply. The gasoline reciprocating engines in test cells 50N, 50S, 52N, and 52S are considered an affected source under 40 CFR 60, Subpart JJJJ when a new gasoline engine is installed in the test cell and a test cell exemption does not apply.

(d) Emission unit DTC consists of the following four (4) transmission reliability test cells, TC-107, TC-109, TC-111 and TC-112. All test cells were constructed in 1985. The following engines can be used in any one of the individual test cells mentioned above:
Under 40 CFR 63, Subpart ZZZZ, these engines are each an affected source. The engines in each of the test cells are considered affected sources under 40 CFR 60, Subpart III when a new engine is installed in the test cell and a test cell exemption does not apply.

(e) Emission unit PTS14 consists of the following four (4) transmission test stands, identified as test stand O-2, O-24, O-25 and O-31. Test stands O-2, O-24, O-25 and O-31 were constructed in 1978, 1979, 1986, 1986, and 1984 respectively. The table below lists the fuel type and engine type that each stand is capable of accommodating based on the physical characteristics of each stand. Test stands O-2, and O-31 each utilize an oxidation catalyst system to control CO emissions.

Under 40 CFR 63, Subpart ZZZZ, these engines are each an affected source. The engines in each of the test stands are considered affected sources under 40 CFR 60, Subpart III when a new engine is installed in the test stand and a test cell exemption does not apply.

(f) Transmission Test Cell 702, identified as Emission Unit ID ETC702, consisting of one (1) reciprocating engine firing diesel fuel, with an estimated maximum engine size of 4000 hp, and exhausting at Stack/ Vent IDs PTE062 and PTE062A. This emission unit can accommodate engines of greater than 600 horsepower. Constructed in 2002.

Under 40 CFR 63, Subpart ZZZZ, this operation is an affected source. The engine is considered an affected source under 40 CFR 60, Subpart III when a new engine is installed in the test cell and a test cell exemption does not apply.

(g) One (1) natural gas-fired boiler, identified as Emission Unit ID BLR 6, constructed in 2011, with a maximum heat input of 99 million Btu per hour, equipped with low-NOx burners and flue gas recirculation.

Under 40 CFR 60, Subpart Dc, this operation is an affected source.

(h) Hydrochloric Acid Tanks in Plating Room

(i) Transmission Test Cell 55, identified as ETC55, permitted in 2013, consisting of two reciprocating diesel-fired engines, with an estimated maximum engine size of 4,000 hp each, exhausting to Stacks/Vents PTE93 and PTE94.
Under 40 CFR 63, Subpart ZZZZ, this operation is an affected source. The engine is considered an affected source under 40 CFR 60, Subpart IIII when a new engine is installed in the test cell and a test cell exemption does not apply.

(j) Transmission Test Cell 53, identified as ETC53, approved in 2015 for construction, consisting of two reciprocating engines (53N and 53S) firing low sulfur diesel fuel (150 ppm or less), with an estimated maximum engine size of equal to or less than 1000 HP each and exhausting to Stack/Vents PTE95 and PTE96.

Under 40 CFR 63, Subpart ZZZZ, this operation is an affected source. The engine is considered an affected source under 40 CFR 60 Subpart IIII when a new diesel engine is installed in the test cell and a test cell exemption does not apply.

(k) One (1) diesel-fired emergency generator, approved in 2016 for construction, identified as Genset 1a, with a maximum power output of 2,965 HP (22.76 MMBtu/hr input), using low sulfur diesel (150 ppm sulfur) equipped with a diesel particulate filter, exhausting to stack G1a. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ]

(l) One (1) diesel-fired emergency generator, approved in 2016 for construction, identified as Genset 1b, with a maximum power output of 2,965 HP (22.76 MMBtu/hr input), using low sulfur diesel (150 ppm sulfur) equipped with a diesel particulate filter, exhausting to stack G1b. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ]

(m) One (1) natural gas-fired boiler, identified as BLR 1, approved in 2018 for construction, with a maximum heat input capacity of 97.85 MMBtu/hr, equipped with low NOx Burner and flue gas recirculation system for NOx control and exhausting to stack #1.

Under 40 CFR 60, Subpart Dc, this boiler is an affected source.

(n) One (1) natural gas-fired boiler, identified as BLR 3, approved in 2018 for construction, with a maximum heat input capacity of 36.77 MMBtu/hr, equipped with low NOx Burner and flue gas recirculation system for NOx control and exhausting to stack #3.

Under 40 CFR 60, Subpart Dc, this boiler is an affected source.

### Insignificant Activities

The source also consists of the following insignificant activities:

(a) Space heaters, process heaters, or boilers using the following fuels:

1. Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.
2. Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.
3. Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.

(b) Fuel dispensing activities, including the following:
(1) A gasoline fuel transfer and dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day, such and filling storage tanks having a storage capacity equal to or less than ten thousand five hundred (10,500) gallons. Such storage tanks may be in a fixed location or on mobile equipment; including:

(A) One (1) above ground storage tank, with a maximum storage capacity of 500 gallons.

(B) One (1) above ground storage tank, approved in 2017 for construction, with a maximum storage capacity of 10,000 gallons.

Under 40 CFR 63, Subpart CCCCCC, this operation is an affected source.

(2) A petroleum fuel, other than gasoline, dispensing facility having a storage capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per or less.

(c) The following VOC and HAP storage containers:

(1) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs less than twelve thousand (12,000) gallons.

(2) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

(d) Refractory storage not requiring air pollution control equipment.

(e) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.

(f) Machining where an aqueous cutting coolant continuously floods the machining interface.

(g) Cleaners and solvents, containing no VOCs and/or HAPS.

(h) The following equipment related to manufacturing activities not resulting in the emission of HAPs: soldering equipment, welding equipment.

(i) Closed loop heating and cooling systems.

(j) Solvent recycling systems with batch capacity less than or equal to 100 gallons.

(k) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.

(l) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs.

(m) Water based adhesives that are less than or equal to 5% by volume of VOCs excluding HAPs.

(n) Noncontact cooling tower systems with forced and induced draft cooling tower system not regulated under a NESHAP.

(o) Quenching operations used with heat treating processes.
(p) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(q) Heat exchanger cleaning and repair.

(r) Process vessel degassing and cleaning to prepare for internal repairs.

(s) Paved and unpaved roads and parking lots with public access

(t) Underground conveyors.

(u) Asbestos abatement projects regulated by 326 IAC 14-10.

(v) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.

(w) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.

(x) Blowdown for any of the following: boiler; compressors; pumps; and cooling tower.

(y) On-site fire and emergency response training approved by the department.

(z) Emergency diesel generators not exceeding 1600 horsepower.

(1) one (1) 1490 hp diesel emergency generator located in the Powerhouse courtyard.

(2) one (1) 490 hp diesel emergency generator located in Plant 7.

(3) one (1) 415 hp diesel emergency generator located in Plant 12/14.

Under 40 CFR 60, Subpart IIII, these operations are each an affected source.

Under 40 CFR 63, Subpart ZZZZ, these operations are each an affected source.

(aa) One (1) diesel-fired emergency stationary fire pump engine, identified as Engine 1, constructed in 2012 and permitted in 2017, with a maximum heat input of 2.52 MMBtu/hr.

Under 40 CFR 63, Subpart ZZZZ, Engine 1 is considered an affected source.

Under 40 CFR 60, Subpart IIII, Engine 1 is considered an affected facility.

(bb) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6.5-1-2(a)]

(1) Shot Blast controlled with fabric filters.

(cc) Purge double block and bleed valves.

(dd) Filter or coalescer media changeout.

(ee) A laboratory as defined in 326 IAC 2-7-1(21)(D).
Activities or categories of activities with individual HAP emissions not previously identified. Any unit emitting greater than 1 pound per day but less than 5 pounds per day or 1 ton per year of a single HAP.

1. Production welding - manganese
2. Hydrochloric Acid Tanks in Plating Room

Twenty-five (25) carburizing, atmosphere, heat treat furnaces, each using methanol (supplemented with methane as needed) at a maximum usage rate of 60 gallons per day to produce carbon monoxide and hydrogen rich atmosphere, each equipped with a natural gas-fired tube burner or with electric coils to produce process heat, each equipped with an integral natural gas-fired flame curtain to prevent ambient air from entering the furnace when the outer door is opened, and each equipped with an integral pilot burner located at the effluent of the heat treat furnace vestibule to combust flammable gases (carbon monoxide and hydrogen) in the furnace exhaust, as follows:

<table>
<thead>
<tr>
<th>Location</th>
<th>Unit ID</th>
<th>Construction Year</th>
<th>Natural Gas Maximum Heat Input Capacities (MMBtu/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tube Burner</td>
</tr>
<tr>
<td>Plant 14</td>
<td>EU 301194</td>
<td>1995</td>
<td>N/A*</td>
</tr>
<tr>
<td>Plant 14</td>
<td>EU 301195</td>
<td>1995</td>
<td>N/A*</td>
</tr>
<tr>
<td>Plant 14</td>
<td>EU 301196</td>
<td>1995</td>
<td>N/A*</td>
</tr>
<tr>
<td>Plant 14</td>
<td>EU 301522</td>
<td>1995</td>
<td>N/A*</td>
</tr>
<tr>
<td>Plant 14</td>
<td>EU 301523</td>
<td>1995</td>
<td>N/A*</td>
</tr>
<tr>
<td>Plant 6</td>
<td>EU 231548</td>
<td>1996</td>
<td>0.88</td>
</tr>
<tr>
<td>Plant 6</td>
<td>EU 234909</td>
<td>1996</td>
<td>0.88</td>
</tr>
<tr>
<td>Plant 6</td>
<td>EU 234887</td>
<td>1998</td>
<td>0.88</td>
</tr>
<tr>
<td>Plant 6</td>
<td>EU 234907</td>
<td>1998</td>
<td>0.88</td>
</tr>
<tr>
<td>Plant 6</td>
<td>EU 234908</td>
<td>1998</td>
<td>0.88</td>
</tr>
<tr>
<td>Plant 6</td>
<td>EU 234910</td>
<td>1998</td>
<td>0.88</td>
</tr>
<tr>
<td>Plant 3</td>
<td>EU 245181</td>
<td>1998</td>
<td>0.88</td>
</tr>
<tr>
<td>Plant 3</td>
<td>EU 245182</td>
<td>1998</td>
<td>0.88</td>
</tr>
<tr>
<td>Plant 3</td>
<td>EU 245183</td>
<td>1998</td>
<td>0.88</td>
</tr>
<tr>
<td>Plant 3</td>
<td>EU 245184</td>
<td>1998</td>
<td>0.88</td>
</tr>
<tr>
<td>Plant 3</td>
<td>EU 245195</td>
<td>1998</td>
<td>0.88</td>
</tr>
<tr>
<td>Plant 3</td>
<td>EU 245187</td>
<td>1998</td>
<td>0.88</td>
</tr>
<tr>
<td>Plant 3</td>
<td>EU 245188</td>
<td>1998</td>
<td>0.88</td>
</tr>
<tr>
<td>Plant 3</td>
<td>EU 245189</td>
<td>1998</td>
<td>0.88</td>
</tr>
<tr>
<td>Plant 12</td>
<td>EU 100055736</td>
<td>2000</td>
<td>1.1</td>
</tr>
<tr>
<td>Plant 12</td>
<td>EU 237012</td>
<td>2000</td>
<td>1.1</td>
</tr>
<tr>
<td>Plant 12</td>
<td>EU 237013</td>
<td>2000</td>
<td>1.1</td>
</tr>
<tr>
<td>Plant 3</td>
<td>EU 611678</td>
<td>2003</td>
<td>0.88</td>
</tr>
<tr>
<td>Plant 12</td>
<td>EU 615955</td>
<td>2018</td>
<td>1.08</td>
</tr>
</tbody>
</table>

*N/A = not applicable, since these furnaces are heated with electric coils.

Each of the carburizing, atmosphere, heat treat furnaces is equipped with an oil quench tank to cool the metal parts after heat treatment, using mineral oil-based or refined petroleum oil-based quench oil. The potential to emit volatile organic compounds (VOC) and hazardous air pollutants (HAP) from the quench oil tanks are negligible due to the low vapor pressure of the quench oils used.

The following tanks involved in plating operations:
(1) Three copper rod tanks (Dept. 1492 tanks A6, A7, A8)
(2) One copper strike tank (Dept. 1492 tank A5)
(3) Three (3) pickling (HCL) tanks (Dept. 1492 tanks A3, B1, B19)
(4) One anodizing (H₂SO₄) tank (Dept. 1492 tank G3)
(5) One manganese phosphate tank (Dept. 1492 tank F3)

Under 40 CFR 63, Subpart WWWW, this operation is an affected source.

(6) One solution machining (HNO₃) tank (Dept. 1492 tank J6)
(7) One (1) derusting tanks (Dept. 1492 tank E5)
(8) Three copper strip tanks (Dept. 1492 tanks I9, I10, I11)

(ii) Two (2) maintenance paint booths.

(jj) One (1) soil and groundwater remediation system, identified as Emission Unit ENCORE, installed in 2003, consisting of:

(1) Soil vapor extraction (SVE) system, located at Plant 12, including miscellaneous piping and:
   (A) seventeen (17) soil vapor extraction wells;
   (B) one (1) 90 gallon knock-out tank, and
   (C) one (1) 30 -horsepower blower rated at 750 standard cubic feet per minute (scfm), with emissions exhausting to one (1) stack identified as SVE vent.

(2) Soil vapor extraction (SVE) system, located at Plant 14, including miscellaneous piping and:
   (A) nine (9) soil vapor extraction wells;
   (B) one (1) 117 gallon knock-out tank, and
   (C) one (1) 10-horsepower blower rated at 300 standard cubic feet per minute (scfm), with emissions exhausting to one (1) stack identified as SVE vent.

(3) Dense non-aqueous phase liquid (DNAPL)/groundwater recovery system, including miscellaneous piping, pumps and:
   (A) up to twenty (20) recovery wells;
   (B) one (1) DNAPL/water separator rated at 15 gpm, with emissions exhausting to one (1) stack identified as SVE vent;
   (C) one (1) 875 gallon flow equalization tank, with emissions exhausting to one (1) stack identified as air stripper vent; and
(D) one (1) air stripper rated at sixty (60) gpm, with one (1) five (5) horsepower blower rated at 320 scfm with emissions exhausting to one (1) stack identified as air stripper vent.

(kk) One (1) paint booth, identified as PAINT98, approved in 2017 for construction, equipped with air atomization spray guns for metal coating, with a maximum coating usage of 720.0 gallons per year, using dry filters for overspray control, and exhausting at Stack/Vent 3046.

(ll) Eight (8) hot water spray washers used to wash parts before and after heat treatment, with each washer heated with steam or with electric coils, using an aqueous alkaline cleaning and rust preventative solution that does not contain volatile organic compounds (VOC) and hazardous air pollutants (HAP), as follows:

<table>
<thead>
<tr>
<th>Location</th>
<th>Unit ID</th>
<th>Construction Date</th>
<th>Exhaust</th>
<th>Heat Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant 4</td>
<td>245198</td>
<td>5/25/98</td>
<td>Stack**</td>
<td>Steam</td>
</tr>
<tr>
<td>Plant 4</td>
<td>245199</td>
<td>5/25/98</td>
<td>Stack**</td>
<td>Steam</td>
</tr>
<tr>
<td>Plant 6</td>
<td>100091973</td>
<td>10/13/2008</td>
<td>Stack**</td>
<td>Electric</td>
</tr>
<tr>
<td>Plant 6</td>
<td>100091972</td>
<td>08/22/2008</td>
<td>Stack**</td>
<td>Steam</td>
</tr>
<tr>
<td>Plant 6</td>
<td>245200</td>
<td>5/25/98</td>
<td>Stack**</td>
<td>Steam</td>
</tr>
<tr>
<td>Plant 12</td>
<td>615959</td>
<td>not known</td>
<td>Stack**</td>
<td>Electric</td>
</tr>
<tr>
<td>Plant 12</td>
<td>237018</td>
<td>08/23/2001</td>
<td>Stack**</td>
<td>Electric</td>
</tr>
<tr>
<td>Plant 14</td>
<td>300161</td>
<td>07/21/2003</td>
<td>Indoors</td>
<td>Electric</td>
</tr>
</tbody>
</table>

**The spray washer stack has not been assigned a stack ID number.

(mm) Twenty (20) draw/temper furnaces used to complete the hardening process and drive off moisture, with each furnace heated with natural gas heaters, as follows:

<table>
<thead>
<tr>
<th>Location</th>
<th>Unit ID</th>
<th>Construction Date</th>
<th>Fuel Combusted</th>
<th>Maximum Fuel Heat Input Capacity (MMBtu/hr)</th>
<th>Exhaust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant 4</td>
<td>245194</td>
<td>1/2/1998</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 4</td>
<td>245195</td>
<td>1/2/1998</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 4</td>
<td>245196</td>
<td>1/2/1998</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 4</td>
<td>245197</td>
<td>5/25/1998</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 4</td>
<td>10010681</td>
<td>12/26/2005</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 4</td>
<td>246037</td>
<td>4/9/2002</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 4</td>
<td>100010682</td>
<td>12/26/2005</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 4</td>
<td>245191</td>
<td>1/2/1998</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 4</td>
<td>245190</td>
<td>1/2/1998</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 4</td>
<td>600677</td>
<td>Not available</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 6</td>
<td>234904</td>
<td>8/7/1998</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 6</td>
<td>231550</td>
<td>2/19/1998</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 6</td>
<td>231549</td>
<td>1/1/1995</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 6</td>
<td>234906</td>
<td>2/19/1996</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 6</td>
<td>234886</td>
<td>2/19/1998</td>
<td>Natural Gas</td>
<td>0.5</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 12</td>
<td>615956</td>
<td>2017</td>
<td>Natural Gas</td>
<td>0.8</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 12</td>
<td>100055737</td>
<td>Not available</td>
<td>Natural Gas</td>
<td>0.35</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 12</td>
<td>237017</td>
<td>8/23/2001</td>
<td>Natural Gas</td>
<td>0.35</td>
<td>Stack*</td>
</tr>
<tr>
<td>Plant 12</td>
<td>237016</td>
<td>8/23/2001</td>
<td>Natural Gas</td>
<td>0.35</td>
<td>Stack*</td>
</tr>
</tbody>
</table>
Five (5) draw/temper furnaces used to complete the hardening process and drive off moisture, with each furnace heated with electric coils, as follows:

<table>
<thead>
<tr>
<th>Location</th>
<th>Unit ID</th>
<th>Construction Date</th>
<th>Fuel Combusted</th>
<th>Maximum Fuel Heat Input Capacity (MMBtu/hr)</th>
<th>Exhaust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant 14</td>
<td>301191</td>
<td>11/28/1995</td>
<td>None (Electric)</td>
<td>N/A*</td>
<td>Inside</td>
</tr>
<tr>
<td>Plant 14</td>
<td>301192</td>
<td>11/28/1995</td>
<td>None (Electric)</td>
<td>N/A*</td>
<td>Inside</td>
</tr>
<tr>
<td>Plant 14</td>
<td>301193</td>
<td>11/28/1995</td>
<td>None (Electric)</td>
<td>N/A*</td>
<td>Inside</td>
</tr>
<tr>
<td>Plant 14</td>
<td>301524</td>
<td>11/28/1995</td>
<td>None (Electric)</td>
<td>N/A*</td>
<td>Inside</td>
</tr>
<tr>
<td>Plant 14</td>
<td>301525</td>
<td>11/28/1995</td>
<td>None (Electric)</td>
<td>N/A*</td>
<td>Inside</td>
</tr>
</tbody>
</table>

*N/A = not applicable, since these furnaces are heated with electric coils.

One (1) cooling tower, identified as CT1, consisting of 3 cells, approved in 2018 for construction, with a maximum water recirculation rate of 800 gallons per hour with maximum total dissolved solid content of 1,570 parts per million in the water, without control and exhausting outside.

**Emission Calculations**

See Appendix A of this Technical Support Document for detailed emission calculations.

See Appendix B of this Technical Support Document for detailed Actual to Projected Actual (ATPA) emission calculations.

**County Attainment Status**

The source is located in Marion County, Wayne Township County.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO₂</td>
<td>Nonattainment effective October 4, 2013, for the 2010 SO₂ standard for Center, Perry, and Wayne townships. Better than national standards for the remainder of the county.</td>
</tr>
<tr>
<td>CO</td>
<td>Attainment effective February 18, 2000, for the part of the city of Indianapolis bounded by 11th Street on the north; Capitol Avenue on the west; Georgia Street on the south; and Delaware Street on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of Indianapolis and Marion County.</td>
</tr>
<tr>
<td>O₃</td>
<td>Unclassifiable or attainment effective January 16, 2018, for the 2015 8-hour ozone standard.</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Unclassifiable or attainment effective April 15, 2015, for the 2012 annual PM₂.₅ standard.</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour PM₂.₅ standard.</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>Unclassifiable effective November 15, 1990.</td>
</tr>
<tr>
<td>NO₂</td>
<td>Unclassifiable or attainment effective January 29, 2012, for the 2010 NO₂ standard.</td>
</tr>
<tr>
<td>Pollutant</td>
<td>Designation</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
</tr>
<tr>
<td>Pb</td>
<td>Unclassifiable or attainment effective December 31, 2011, for the 2008 lead standard.</td>
</tr>
</tbody>
</table>

(a) Ozone Standards
Volatil organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. County Name County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) PM$_{2.5}$
County Name County has been classified as attainment for PM$_{2.5}$. Therefore, direct PM$_{2.5}$, SO$_2$, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) SO$_2$
U.S. EPA, in the Federal Register Notice 78 FR 47191 dated August 5, 2013, designated Marion County, Wayne Township as nonattainment for SO$_2$. Therefore, SO$_2$ emissions were reviewed pursuant to the requirements of Emission Offset, 326 IAC 2-3.

(d) Other Criteria Pollutants
Marion County, Wayne Township has been classified as attainment or unclassifiable in Indiana for all the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions
Since this type of operation is not one (1) of the twenty-eight (28) listed source categories under 326 IAC 2-2-1(ff)(1), 326 IAC 2-3-2(g), or 326 IAC 2-7-1(22)(B), and there is no applicable New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Within this source, there is a nested source consisting of "Fossil fuel boilers (or combinations thereof) totaling more than two hundred fifty million (250,000,000) British thermal units per hour heat input" which is considered one (1) of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1), 326 IAC 2-3-2(g), or 326 IAC 2-7-1(22)(B) based on the EPA guidance for “nesting activities”. Therefore, any fugitive emissions from these boilers are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

The fugitive emissions of hazardous air pollutants (HAP) are counted toward the determination of Part 70 Permit applicability and source status under Section 112 of the Clean Air Act (CAA).

Greenhouse Gas (GHG) Emissions
On June 23, 2014, in the case of Utility Air Regulatory Group v. EPA, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court’s decision. U.S. EPA’s guidance states that U.S. EPA will no longer require PSD or Title V permits for sources “previously classified as ‘Major’ based solely on greenhouse gas emissions.”

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted
under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.

### Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

<table>
<thead>
<tr>
<th>Unrestricted Potential Emissions (ton/year)</th>
<th>PM¹</th>
<th>PM₁₀¹</th>
<th>PM₂.₅¹,₂</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
<th>Single HAP³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PTE of Entire Source Excluding Fugitive Emissions*</td>
<td>294.0</td>
<td>230.3</td>
<td>234.1</td>
<td>1079.5</td>
<td>7595.8</td>
<td>790.2</td>
<td>1962.3</td>
<td>24.9</td>
<td>9.9 (Toluene)</td>
</tr>
<tr>
<td>Title V Major Source Thresholds</td>
<td>NA</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>25</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>PSD Major Source Thresholds</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>--</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>Emission Offset Major Source Thresholds</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>100</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
</tbody>
</table>

¹Under the Part 70 Permit program (40 CFR 70), PM₁₀ and PM₂.₅, not particulate matter (PM), are each considered as a “regulated air pollutant.”

²PM₂.₅ listed is direct PM₂.₅.

³Single highest source-wide HAP

*Fugitive HAP emissions are always included in the source-wide emissions.

Appendix A of this TSD reflects the detailed unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(30)) of PM, PM₁₀, PM₂.₅, SO₂, NOₓ, VOC and CO, each, is equal to or greater than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(30)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(30)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

### Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

### Description of Proposed Modification to an Existing Source

The Office of Air Quality (OAQ) has reviewed an application, submitted by Allison Transmission, Inc. - Speedway Main Campus on April 10, 2019, relating to two (2) projects, described as follows:
Project 1

(a) Modify the existing Test Cell # 48N to include the ability to conduct testing with natural gas and gasoline. This test cell is currently permitted to use diesel fuel only.

(b) Modify the existing Test Cell # 48S to include the ability to conduct testing with natural gas and gasoline fueled engines. This test cell is currently permitted to use diesel fuel only.

(c) Modify the existing Test Cell # 51N in order to increase the maximum power rating from 1200 to 4000 Horsepower.

(d) Add new Test Cell # 45 described as follows:

<table>
<thead>
<tr>
<th>Test Cell ID</th>
<th>Construction Dates</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>Stack ID</th>
<th>control</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>approved in 2020 for construction</td>
<td>diesel, natural gas, gasoline and propane</td>
<td>Reciprocating</td>
<td>4000</td>
<td>PTE 057</td>
<td>none</td>
</tr>
</tbody>
</table>

(e) Add new Vehicle Environmental Testing (VET) facility (VET Project), consisting of following:

(A) Test cells as follows:

<table>
<thead>
<tr>
<th>Test Cell ID</th>
<th>Construction Dates</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>control</th>
<th>Stack ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC1</td>
<td>approved in 2020 for construction</td>
<td>diesel, natural gas, gasoline and natural gas</td>
<td>Reciprocating</td>
<td>1000</td>
<td>none</td>
<td>SVC1</td>
</tr>
<tr>
<td>VC2</td>
<td>approved in 2020 for construction prior 1977</td>
<td>diesel, natural gas, gasoline and natural gas</td>
<td>Reciprocating</td>
<td>1000</td>
<td>none</td>
<td>SVC2</td>
</tr>
<tr>
<td>S1</td>
<td>approved in 2020 for construction prior 1977</td>
<td>diesel, natural gas, gasoline and natural gas</td>
<td>Reciprocating</td>
<td>1000</td>
<td>none</td>
<td>SS1</td>
</tr>
<tr>
<td>S2</td>
<td>approved in 2020 for construction prior 1977</td>
<td>diesel, natural gas, gasoline and natural gas</td>
<td>Reciprocating</td>
<td>1000</td>
<td>none</td>
<td>SS2</td>
</tr>
</tbody>
</table>

(B) Three (3) natural gas-fired Boilers, identified as BLR 7, BLR 8 and BLR 9, respectively, approved in 2020 for construction, each capable of combusting only natural gas, with a maximum capacity of 2.36, 2.36 and 1.5 MMbtu/hr, exhausting out to stacks R1, R2 and R3, respectively.

(C) Two (2) induced draft cooling towers, identified as VCT1 and VCT2, respectively, approved in 2020 for construction, each with a maximum water recirculation rate of 3000 gallons per minute with maximum total dissolved solid content of 24,000 parts per million in the water, without control and exhausting outside.

(D) Three (3) natural gas-fired VET facility furnaces, identified as RZ1, RZ2 and RZ3, respectively, approved in year for construction in 2020, each with a maximum capacity of maximum capacity 0.4 MMBtu/hr, and venting outside.

Project 2
Add new shot blast unit, described as follows:

One (1) shot blast unit, identified as SB1, constructed in 2019, with a maximum shot usage rate of 450 pounds per hour, using coal fired boiler slag as shot media, using dust collector filters DC1 as control, and exhausting inside.

---

**Project Aggregation**

(a) The Test Cells VC1, VC2, S1 and S2 emissions are not accounted in for air permitting purposes. The reasons are as follows:

The vehicles that will be brought to Test Cells VC1, VC2, S1 and S2 are fully assembled and have already been introduced into commerce and driven on public roadways. They have been assigned VIN numbers and emissions labels have been affixed to their internal combustion engines. The vehicles are powered by internal combustion engines that have been certified by EPA as meeting the applicable emissions standards or are exempt from those standards. They clearly fall into an exception to the definition of "stationary source" and, as such, are not stationary sources for air permitting purposes.

The Clean Air Act ("CAA") defines "stationary source" as "generally any source of an air pollutant except those resulting directly from an internal combustion engine for transportation purposes or from a non-road engine or non-road vehicle." 42 U.S.C. §7602(z) (also referred to as Section 302(z) of the CAA) (emphasis added). EPA Region 5 has determined (a) that an internal combustion engine is not required to be actively in the process of being used for transportation purposes in order to fall within the internal combustion engine exception to the definition of "stationary source" and (b) that testing operations of vehicles containing combustion engines that are ready for transportation do not fall within the definition of "stationary source."

In a November 27, 2012 letter from EPA Region 5 to the Michigan Department of Environmental Quality (copy attached), the issue being addressed was whether General Motors' roll-off vehicle testing operations were a stationary source. The testing at issue was "one of the final steps of motor vehicle production in which fully assembled vehicles are driven to the test area where final checks are performed on various vehicle functions (for example, accelerating and braking…). At the time a vehicle enters a roll test at Orion it is ready for transportation." (Emphasis added).

EPA concluded that "the direct emissions from roll-off tests at the GM Orion facility are emissions resulting directly from internal combustion engines 'for transportation purposes' within the meaning of Section 302(z) of the Clean Air Act and as such the engines of the vehicles tested are not subject to stationary source requirements."

The GM vehicles that were the subject of EPA's 2012 determination were not in the process of being used for transportation purposes, yet EPA determined that they fell within the internal combustion engine exception to the definition of "stationary source" because they are "ready for transportation." Just like GM's vehicles that were being tested, the vehicles to be tested at ATI's VET facility are ready for transportation and are not stationary sources for air permitting purposes.

Furthermore, the vehicles to be tested at Test Cells VC1, VC2, S1 and S2 are mobile sources. The CAA defines "mobile source" as "a motor vehicle, non-road engine or non-road vehicle." 40 C.F.R. § 51.50. We understand that it may be IDEM's position that a motor vehicle must be actually transporting something or someone before it is considered a mobile source. There is no support for that position in the applicable regulations or statutes.

The applicable statute defines "motor vehicle" as "any self-propelled vehicle designed for transporting persons or property on a street or highway." 42 U.S.C. § 7550(2) (emphasis added).
The only relevant requirement is that the vehicle be designed to transport persons or property. The statute does not require a vehicle to be actively transporting persons or property in order for it to be a mobile source. 40 C.F.R. § 51.50 defines "motor vehicle" as "any self-propelled vehicle used to carry people or property on a street or highway." This regulatory definition of "motor vehicle" does not use the active voice such as the word carrying; rather, it only requires that the vehicle's purpose be to transport persons or property on a street or highway. The purpose of the vehicles to be tested at Test Cells VC1, VC2, S1 and S2 is transportation of persons or property on a street or highway. Thus, they are mobile sources, not stationary sources.

The Test Cells VC1, VC2, S1 and S2 are not considered stationary sources and therefore, Test Cells VC1, VC2, S1 and S2 are not subject to air permitting requirements.

(b) The Project 1 and Project 2 emission are not combined for the PSD applicability determination. The reason is as follows:

The shot blast unit (SB1) will be used for abrasive blasting of equipment that comes from locations throughout the facilities. This is not a capital project and it will be funded from the annual budget of the facilities maintenance group. The facilities management chain does not intersect with other departments until the senior vice president level.

### Enforcement Issue

IDEM is aware that the shot blast unit (SB1) has been constructed prior to receipt of the proper permit. IDEM is reviewing this matter and will take the appropriate action. This proposed approval is intended to satisfy the requirements of the construction permit and/or operating rules.

### Permit Level Determination – Part 70 Modification to an Existing Source

Pursuant to 326 IAC 2-1.1-1(12), Potential to Emit is defined as "the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency."

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}$</th>
<th>SO$_2$</th>
<th>NO$_X$</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP$^2$</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>11.56</td>
<td>6.63</td>
<td>6.43</td>
<td>58.39</td>
<td>370.02</td>
<td>61.47</td>
<td>98.29</td>
<td>4.64061</td>
<td>15.33192</td>
</tr>
<tr>
<td>BLR 7</td>
<td>0.02</td>
<td>0.08</td>
<td>0.08</td>
<td>0.01</td>
<td>1.01</td>
<td>0.06</td>
<td>0.85</td>
<td>0.00003</td>
<td>0.01912</td>
</tr>
<tr>
<td>BLR 8</td>
<td>0.02</td>
<td>0.08</td>
<td>0.08</td>
<td>0.01</td>
<td>1.01</td>
<td>0.06</td>
<td>0.85</td>
<td>0.00003</td>
<td>0.01912</td>
</tr>
<tr>
<td>BLR 9</td>
<td>0.01</td>
<td>0.05</td>
<td>0.05</td>
<td>0.00</td>
<td>0.64</td>
<td>0.04</td>
<td>0.54</td>
<td>0.00002</td>
<td>0.01216</td>
</tr>
<tr>
<td>VET cooling towers VCT1 and VCT2</td>
<td>0.79</td>
<td>0.24</td>
<td>0.0014</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>VET Furnaces RZ1, RZ2 and RZ3</td>
<td>0.01</td>
<td>0.04</td>
<td>0.04</td>
<td>0.003</td>
<td>0.51</td>
<td>0.03</td>
<td>0.43</td>
<td>0.00002</td>
<td>0.00971</td>
</tr>
<tr>
<td>shot blast unit (SB1)</td>
<td>19.71</td>
<td>13.80</td>
<td>13.80</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
### PTE Before Controls of the New Emission Units (ton/year)

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}^1$</th>
<th>SO$_2$</th>
<th>NO$_X$</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP$^2$</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PTE Before Controls of the New Emission Units:</td>
<td>32.12</td>
<td>20.90</td>
<td>20.47</td>
<td>58.41</td>
<td>373.21</td>
<td>61.64</td>
<td>100.96</td>
<td>4.64</td>
<td>15.39</td>
</tr>
</tbody>
</table>

$^1$PM$_{2.5}$ listed is direct PM$_{2.5}$.

$^2$Single highest HAP.

Appendix A of this TSD reflects the detailed potential emissions of the modification.

### PTE Increase of the Modified Emission Units (ton/year)

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}^1$</th>
<th>SO$_2$</th>
<th>NO$_X$</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP$^2$</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTE Before Modification 48N</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PTE After Modification 48N</td>
<td>3.79</td>
<td>3.79</td>
<td>3.79</td>
<td>0.02</td>
<td>126.14</td>
<td>113.48</td>
<td>15.22</td>
<td>8.57</td>
<td>28.31</td>
</tr>
<tr>
<td>PTE Increase 48N</td>
<td>3.79</td>
<td>3.79</td>
<td>3.79</td>
<td>0.02</td>
<td>126.14</td>
<td>113.48</td>
<td>15.22</td>
<td>8.57</td>
<td>28.31</td>
</tr>
<tr>
<td>PTE Before Modification 48S</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PTE After Modification 48S</td>
<td>3.79</td>
<td>3.79</td>
<td>3.79</td>
<td>0.64</td>
<td>126.14</td>
<td>113.48</td>
<td>28.91</td>
<td>8.57</td>
<td>28.31</td>
</tr>
<tr>
<td>PTE Increase 48S</td>
<td>3.79</td>
<td>3.79</td>
<td>3.79</td>
<td>0.64</td>
<td>126.14</td>
<td>113.48</td>
<td>28.91</td>
<td>8.57</td>
<td>28.31</td>
</tr>
<tr>
<td>PTE Before Modification 51N</td>
<td>3.94</td>
<td>2.26</td>
<td>2.19</td>
<td>19.91</td>
<td>126.14</td>
<td>3.55</td>
<td>33.51</td>
<td>0.01</td>
<td>0.07</td>
</tr>
<tr>
<td>PTE After Modification 51N</td>
<td>11.56</td>
<td>6.63</td>
<td>6.43</td>
<td>58.39</td>
<td>370.02</td>
<td>10.41</td>
<td>98.29</td>
<td>0.03</td>
<td>0.19</td>
</tr>
<tr>
<td>PTE Increase 51N</td>
<td>7.62</td>
<td>4.37</td>
<td>4.24</td>
<td>38.49</td>
<td>243.88</td>
<td>6.86</td>
<td>64.78</td>
<td>0.03</td>
<td>0.12</td>
</tr>
<tr>
<td>Total PTE Increase of the Modified Emission Unit(s)/Process</td>
<td>15.20</td>
<td>11.95</td>
<td>11.82</td>
<td>39.15</td>
<td>496.17</td>
<td>233.82</td>
<td>108.90</td>
<td>17.16</td>
<td>56.73</td>
</tr>
</tbody>
</table>

$^1$PM$_{2.5}$ listed is direct PM$_{2.5}$.

$^2$Single highest HAP.

Appendix A of this TSD reflects the detailed potential emissions of the modification.
### PTE Increases Due to the Modification (ton/year)

<table>
<thead>
<tr>
<th></th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PTE Before</td>
<td>32.12</td>
<td>20.90</td>
<td>20.47</td>
<td>58.41</td>
<td>373.21</td>
<td>61.64</td>
<td>100.96</td>
<td>4.64</td>
<td>15.39</td>
</tr>
<tr>
<td>Controls of the New</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Emission Units</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total PTE Increase</td>
<td>15.20</td>
<td>11.95</td>
<td>11.82</td>
<td>39.15</td>
<td>496.17</td>
<td>233.82</td>
<td>108.90</td>
<td>17.16</td>
<td>56.73</td>
</tr>
<tr>
<td>of the Modified</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emission Unit(s)/Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total PTE of the</td>
<td>47.32</td>
<td>32.85</td>
<td>32.29</td>
<td>97.56</td>
<td>869.37</td>
<td>295.47</td>
<td>209.87</td>
<td>21.80</td>
<td>72.11</td>
</tr>
<tr>
<td>Modification</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1PM2.5 listed is direct PM2.5.

2Single highest HAP.

Appendix A of this TSD reflects the detailed potential emissions of the modification.

**(a) Approval to Construct**

Pursuant to 326 IAC 2-7-10.5(g)(4), a Significant Source Modification is required because this modification has the potential to emit PM, SO2, NOx and VOC and greater than or equal to twenty-five (25) tons per year.

Pursuant to 326 IAC 2-7-10.5(g)(6), a Significant Source Modification is required because this modification has a potential to emit greater than or equal to ten (10) tons per year of a single HAP and/or twenty-five (25) tons per year of any combination of HAPs.

Pursuant to 326 IAC 2-7-10.5(g)(7), a Significant Source Modification is required because this modification has a potential to emit CO greater than or equal to one hundred (100) tons per year of carbon monoxide (CO).

**(b) Approval to Operate**

Pursuant to 326 IAC 2-7-12(d)(1), this change to the permit is being made through a Significant Permit Modification because this modification does not qualify as a Minor Permit Modification or as an Administrative Amendment. The Significant Permit Modification is combined into this renewal.

#### Permit Level Determination – PSD Emissions Increase

**PSD Emissions Increase – Project 1**

On March 13, 2018, Scott E. Pruitt, EPA Administrator, issued a Memorandum "Project Emissions Accounting Under the New Source Review Preconstruction Permitting Program". In this memorandum, based on the reconsideration of some previous conclusions and an examination of the regulations as a whole, the EPA now interprets the provisions set forth in 40 CFR 52.21(a)(iv)(c) through (iv)(f) as providing that any emissions decreases that may result from a given project are to be considered when calculating at Step 1 *(Project Emissions Increase Evaluation)* whether the proposed project will result in a significant emissions increase.

**(a) “Project Emissions Accounting (PEA)” Applicability Test: ATP and ATPA**

Since this project involves the construction of new emissions unit (and/or emissions units considered new for this evaluation) and existing emissions units, the source has opted to use the Project Emissions Accounting applicability test, specified in 326 IAC 2-2-2(d)(5), to determine if
the project results in a Significant Emissions Increase. A Project Emissions Accounting applicability test uses both the Actual to Potential (ATP) test for new emissions units and Actual to Projected Actual (ATPA) test for existing emissions units affected by the modification.

The source has provided information and emission calculations as part of the application for this Project Emissions Accounting test. IDEM, OAQ reviewed the emission calculations provided by the source to verify the emissions factors and methodology used, but has not made any determination regarding the validity and accuracy of certain information such as actual throughput, actual usage and actual hours of operation.

(b) New Emissions Units and Existing Emissions Units Affected by the Modification

This project involves both new emissions units and existing emissions units affected by the modification.

(1) New Emissions Unit

Pursuant to 326 IAC 2-2-1(t)(1), a new emissions unit is any emissions unit that is, or will be, newly constructed and that has existed for less than two (2) years from the date the emissions unit first operated.

(2) Existing Emissions Unit Affected by the Modification

The following emissions units will be considered existing for the purpose of this ATPA test:

(A) Modified emissions units.

The following proposed emissions unit(s) are considered as new emissions units for this evaluation.

(a) Test Cell # 45 described as follows:

<table>
<thead>
<tr>
<th>Test Cell ID</th>
<th>Construction Dates</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>control</th>
<th>Stack ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>approved in 2020 for construction</td>
<td>diesel, natural gas, gasoline and propane</td>
<td>Reciprocating</td>
<td>4000</td>
<td>none</td>
<td>PTE 057</td>
</tr>
</tbody>
</table>

(b) Three (3) natural gas-fired Boilers, identified as BLR 7, BLR 8 and BLR 9, respectively, approved in 2020 for construction, each capable of combusting only natural gas, with a maximum capacity of 2.36, 2.36 and 1.5 MMbtu/hr, exhausting out to stacks R1, R2 and R3, respectively.

(c) Two (2) induced draft cooling tower, identified as VCT1 and VCT2, respectively, approved in 2020 for construction, each with a maximum water recirculation rate of 3000 gallons per minute with maximum total dissolved solid content of 24,000 parts per million in the water, without control and exhausting outside.

(D) Three (3) natural gas-fired VET facility furnaces, identified as RZ1, RZ2 and RZ3, respectively, approved in year for construction in 2020, each with a maximum capacity of maximum capacity 0.4 MMBtu/hr, and venting outside.

The following emissions unit(s) will be considered as modified existing emissions units for this evaluation.

(a) Test Cell # 48N
(b) Test Cell # 48S
(c) Test Cell # 51N

(c) Baseline Actual Emissions
(1) New Emissions Unit(s)
   For a new emissions unit, the baseline actual emissions for purposes of determining the
   Emissions Increase that will result from the initial construction and operation of the unit
   shall equal zero (0) and thereafter, for all other purposes, shall equal the unit's potential
   to emit.

(2) Existing Emissions Unit(s)
   The baseline actual emissions from the existing emissions units involved in this ATPA
   applicability test are based on their emissions from September 1, 2010 through August 1,
   2012.

(d) Project Emissions Accounting Test: ATP and ATPA Summary
   The Emissions Increase of the project is the sum of the emissions difference for each emissions
   unit, calculated using the Actual to Potential (ATP) test for the new emissions units and the
   Actual to Projected Actual (ATPA) test for existing emissions units.

   Hybrid Applicability Test = ATP\(_{(\text{new unit})}\) + ATPA\(_{(\text{existing unit})}\)

(e) Actual to Potential (ATP) Summary
   An Actual to Potential (ATP) applicability test has been conducted the new emissions units and/or
   the emissions units considered new for this evaluation.

   \[\text{ATP}_{(\text{new unit})} = \text{PTE}_{(\text{new unit})} - \text{Baseline Emissions}_{(\text{new unit})}\]

(f) Actual to Projected Actual (ATPA) Summary
   An Actual to Projected Actual (ATPA) applicability test has been conducted for the existing
   emissions units.

   \[\text{ATPA}_{(\text{existing unit})} = \text{Projected Actual Emissions} - \text{Baseline Emissions}\]

   Pursuant to 326 IAC 2-2-1(pp)(2)(B), in lieu of determining the Projected Actual Emissions, a
   source may elect to use the emissions unit's potential to emit (PTE). When using the an
   emissions unit's PTE in lieu of using the Projected Actual Emissions, the source can NOT use
   Could Have Accomodated Emissions/Demand Growth Exclusions.

   \[\text{ATP}_{(\text{existing unit})} = \text{PTE}_{(\text{existing unit})} - \text{Baseline Emissions}\]

   See Appendix B of this TSD Document for detailed emission calculations.

<table>
<thead>
<tr>
<th>Process/Emissions Unit</th>
<th>Formula</th>
<th>PM</th>
<th>PM(_{10})</th>
<th>PM(_{2.5})</th>
<th>SO(_{2})</th>
<th>VOC</th>
<th>CO</th>
<th>NO(_{X})</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAE - Test Cell 45</td>
<td>A</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>(new emission unit)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAE - BLR 7, BLR 8,</td>
<td>B</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>BLR 9, RZ1, RZ2, RZ3,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VCT1 and VCT2 (new</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process/Emissions Unit</td>
<td>Formula</td>
<td>PM</td>
<td>PM(_{10})</td>
<td>PM(_{2.5})</td>
<td>SO(_2)</td>
<td>VOC</td>
<td>CO</td>
<td>NO(_X)</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------</td>
<td>----</td>
<td>------------</td>
<td>------------</td>
<td>------</td>
<td>-----</td>
<td>----</td>
<td>-------</td>
</tr>
<tr>
<td>BAE - Test Cell 48N (existing emission unit)</td>
<td>C</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.35</td>
<td>0.10</td>
<td>1.69</td>
<td>4.43</td>
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<tr>
<td>BAE - Test Cell 48S (existing emission unit)</td>
<td>D</td>
<td>0.34</td>
<td>0.34</td>
<td>0.34</td>
<td>0.36</td>
<td>0.38</td>
<td>1.28</td>
<td>5.31</td>
</tr>
<tr>
<td>BAE - Test Cell 51N (existing emission unit)</td>
<td>E</td>
<td>0.34</td>
<td>0.34</td>
<td>0.34</td>
<td>1.24</td>
<td>0.34</td>
<td>5.90</td>
<td>15.50</td>
</tr>
<tr>
<td><strong>BAE Project total</strong></td>
<td><strong>BAE = A+B+C+D+E</strong></td>
<td><strong>0.77</strong></td>
<td><strong>0.77</strong></td>
<td><strong>0.77</strong></td>
<td><strong>1.95</strong></td>
<td><strong>0.81</strong></td>
<td><strong>8.86</strong></td>
<td><strong>25.24</strong></td>
</tr>
</tbody>
</table>

Projected Actual Emissions (45 (new) 48N, 48S, 51N (all existing)) **

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>PM</th>
<th>PM(_{10})</th>
<th>PM(_{2.5})</th>
<th>SO(_2)</th>
<th>VOC</th>
<th>CO</th>
<th>NO(_X)</th>
</tr>
</thead>
</table>

Total PTE from BLR 7, BLR 8, BLR 9, RZ1, RZ2, RZ3, VCT1 and VCT2

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>PM</th>
<th>PM(_{10})</th>
<th>PM(_{2.5})</th>
<th>SO(_2)</th>
<th>VOC</th>
<th>CO</th>
<th>NO(_X)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td></td>
<td>1.64</td>
<td>0.72</td>
<td>0.24</td>
<td>0.019</td>
<td>0.18</td>
<td>2.68</td>
<td>3.19</td>
</tr>
</tbody>
</table>

Projected Actual Emissions Entire Project

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>PM</th>
<th>PM(_{10})</th>
<th>PM(_{2.5})</th>
<th>SO(_2)</th>
<th>VOC</th>
<th>CO</th>
<th>NO(_X)</th>
</tr>
</thead>
</table>

Project Emissions Increase

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>PM</th>
<th>PM(_{10})</th>
<th>PM(_{2.5})</th>
<th>SO(_2)</th>
<th>VOC</th>
<th>CO</th>
<th>NO(_X)</th>
</tr>
</thead>
</table>

PSD Significant Levels

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>PM</th>
<th>PM(_{10})</th>
<th>PM(_{2.5})</th>
<th>SO(_2)</th>
<th>VOC</th>
<th>CO</th>
<th>NO(_X)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>25</td>
<td>15</td>
<td>10</td>
<td>–</td>
<td>40</td>
<td>100</td>
<td>40</td>
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</table>

Emission Offset Significant Levels

<table>
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<tr>
<th></th>
<th></th>
<th>PM</th>
<th>PM(_{10})</th>
<th>PM(_{2.5})</th>
<th>SO(_2)</th>
<th>VOC</th>
<th>CO</th>
<th>NO(_X)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>40</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

BAE = Baseline Actual Emissions

* PM2.5 listed is direct PM2.5.

** Based on fuel usage limits as described below:

The total emission increase from the project include:

(i) PTEs of the new Test cell 45

(ii) Emission increase due to the new fuel usage at the existing Test Cells 48N and 48S

The new fuels to be used at Test Cells 48N and 48S are natural gas and gasoline. The Test Cells 48N and 48S are currently permitted to use diesel fuel only. The emissions due to diesel fuel could have been accommodated for Test Cells 48N and 48S since the Test Cells 48N and 48S have been permitted to use diesel fuel since the baseline period.

(iii) Emission increase due to increase in the maximum power rating from 1200 to 4000 hp at the existing Test Cell 51N
The Test Cell 51N is currently permitted to use maximum 1200 hp engine. The emissions due to 1200 hp or less than 1200 hp engines could have been accommodated since the Test Cell 51N has been permitted to use maximum 1200 hp engine during since the baseline period.

(iv) Any emissions increase from the use of previously permitted fuels for existing test cells 48N and 48S, as well as for previously permitted engine sizes (upto 1200 HP) in test cell 51N could have been accommodated.

The source has taken fuel usage limits to restrict these total emission increase from the project equal to or less than these total emission increase values. These fuel usage limits will render the requirements of 326 IAC 2-2 and 326 IAC 2-3 not applicable to this modification. These fuel usage limits are specified below this table.

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-3 (Emission Offset) not applicable to Test Cell 45, 48N, 48S, and 51N, combined, the diesel equivalent usage input to engines utilized in Test Cells 45, 48N, 48S and 51N combined shall be limited as shown below with compliance determined at the end of each month (Please refer Appendix A of this ATPA Document for the details of the fuel usage limit and fuel equivalency calculations):

(1) For each pollutant the diesel equivalent usage input shall be less than the stated value.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>diesel equivalent usage (gallons per twelve consecutive month period)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>1,378,691</td>
</tr>
<tr>
<td>VOC</td>
<td>9,888,979</td>
</tr>
<tr>
<td>CO</td>
<td>37,536,648</td>
</tr>
<tr>
<td>PM</td>
<td>74,263,780</td>
</tr>
<tr>
<td>PM10</td>
<td>46,215,352</td>
</tr>
<tr>
<td>PM2.5</td>
<td>32,225,819</td>
</tr>
<tr>
<td>SO2</td>
<td>1,991,596</td>
</tr>
</tbody>
</table>

(2) Test Cell 45 diesel equivalent usage shall be based upon the total amount of fuel (natural gas, gasoline, propane, and diesel) combusted.

(3) Test Cell 51 diesel equivalent usage shall be based upon the amount of diesel fuel consumed when testing an engine with rating greater than 1200 HP.

(4) Test Cell 48N and 48S diesel equivalent usage shall be based upon the total amount of natural gas and gasoline combusted.

Diesel Fuel-Fired EPA Certified Engine - Diesel Equivalent Usage:

(5) When testing a diesel-fired engine certified to meet an EPA emission factor, the diesel equivalent usage shall be computed based on the following formula:

\[ F_{Ce} = F_C \times \frac{E_{F,\text{ACTUAL}}}{E_{F,\text{BENCHMARK}}} \text{ (g/hp-hr)} \]

Where:
FCe = diesel equivalent usage (gallons)
FC = actual fuel use (gallons of diesel)
EFACTUAL = EPA emission factor for engine tested (g/hp-hr)

<table>
<thead>
<tr>
<th>EF_BENCHMARK (g/hp-hr)</th>
<th>Pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.083</td>
<td>NOx</td>
</tr>
<tr>
<td>0.14</td>
<td>VOC</td>
</tr>
<tr>
<td>0.131</td>
<td>CO</td>
</tr>
<tr>
<td>0.015</td>
<td>PM</td>
</tr>
<tr>
<td>0.015</td>
<td>PM10</td>
</tr>
<tr>
<td>0.015</td>
<td>PM2.5</td>
</tr>
<tr>
<td>0.929</td>
<td>SO2</td>
</tr>
</tbody>
</table>

For an EPA Certified Engine, the actual emission factor (EFACTUAL) shall be the EPA emission factor the engine is certified to meet.

Natural Gas-Fired EPA Certified Engine - Diesel Equivalent Usage:

(6) When testing a natural gas-fired engine certified to meet an EPA emission factor, the diesel equivalent usage shall be computed based on the following formula:

$$\text{FCe} = \text{FC} \times 7299 \times \left( \frac{\text{EFACTUAL}}{\text{EF_BENCHMARK}} \right)$$

Where:

- FCe = diesel equivalent usage (gallons)
- FC = actual fuel use (mmscf of natural gas)
- 7299 = adjustment factor (gallon diesel/mmscf natural gas)
- EFACTUAL = EPA emission factor for engine tested (g/hp-hr)

Propane-Fired EPA Certified Engine - Diesel Equivalent Usage:

(7) When testing a propane-fired engine certified to meet an EPA emission factor, the diesel equivalent usage shall be computed based on the following formula:

$$\text{FCe} = \text{FC} \times 17,306 \times \left( \frac{\text{EFACTUAL}}{\text{EF_BENCHMARK}} \right)$$

Where:

- FCe = diesel equivalent usage (gallons)
- FC = actual fuel use (mmscf of propane)
- 17,306 = adjustment factor (gallon diesel/mmscf propane)
- EFACTUAL = EPA emission factor for engine tested (g/hp-hr)
For an EPA Certified Engine, the actual emission factor (EF<sub>ACTUAL</sub>) shall be the EPA emission factor the engine is certified to meet.

**Gasoline-Fired EPA Certified Engine - Diesel Equivalent Usage:**

(8) When testing a gasoline-fired engine certified to meet an EPA emission factor, the diesel equivalent usage shall be computed based on the following formula:

\[ FCe = FC \times 0.56 \times \frac{EF_{ACTUAL}}{EF_{BENCMARK}} \]

Where:

\[ FCe = \text{diesel equivalent usage (gallons)} \]
\[ FC = \text{actual fuel use (gallons gasoline)} \]
\[ 0.56 = \text{adjustment factor (gallon diesel/gallon gasoline)} \]
\[ EF_{ACTUAL} = \text{EPA emission factor for engine tested (g/hp-hr)} \]

<table>
<thead>
<tr>
<th>EF&lt;sub&gt;BENCMARK&lt;/sub&gt; (g/hp-hr)</th>
<th>Pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.083</td>
<td>NOx</td>
</tr>
<tr>
<td>0.14</td>
<td>VOC</td>
</tr>
<tr>
<td>0.131</td>
<td>CO</td>
</tr>
<tr>
<td>0.015</td>
<td>PM</td>
</tr>
<tr>
<td>0.015</td>
<td>PM10</td>
</tr>
<tr>
<td>0.015</td>
<td>PM2.5</td>
</tr>
<tr>
<td>0.929</td>
<td>SO&lt;sub&gt;2&lt;/sub&gt;</td>
</tr>
</tbody>
</table>

For an EPA Certified Engine, the actual emission factor (EF<sub>ACTUAL</sub>) shall be the EPA emission factor the engine is certified to meet.

**Engine that is not EPA certified - Diesel Equivalent Usage:**

(9) When testing an engine not certified to meet an EPA emission factor the following shall be used:

\[ FCe = FC \times EV \]

Where:

\[ FCe = \text{diesel equivalent usage (gallons)} \]
\[ FC = \text{actual fuel use (units from following table)} \]
\[ EV = \text{equivalency factor (from following table)} \]

<table>
<thead>
<tr>
<th>Engine Type</th>
<th>fuel</th>
<th>Fuel unit</th>
<th>equivalency factor (EV)</th>
<th>unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engine Type</td>
<td>fuel</td>
<td>Fuel unit</td>
<td>equivalent factor (EV)</td>
<td>unit</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------------</td>
<td>-----------</td>
<td>------------------------</td>
<td>------</td>
</tr>
<tr>
<td>hp &lt;= 600 or mmbtu&lt;= 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>6.75</td>
<td>unit less</td>
</tr>
<tr>
<td>hp &gt;600 or mmbtu &gt; 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>5.23</td>
<td>unit less</td>
</tr>
<tr>
<td>RICE 2SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>35271</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>45396</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SRB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>24590</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>Gasoline fired</td>
<td>Gasoline</td>
<td>gallon</td>
<td>2</td>
<td>unit less</td>
</tr>
</tbody>
</table>

**VOC**

<table>
<thead>
<tr>
<th>Engine Type</th>
<th>fuel</th>
<th>Fuel unit</th>
<th>equivalent factor (EV)</th>
<th>unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>hp &lt;= 600 or mmbtu&lt;= 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>59.68</td>
<td>unit less</td>
</tr>
<tr>
<td>hp &gt;600 or mmbtu &gt; 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>1.68</td>
<td>unit less</td>
</tr>
<tr>
<td>RICE 2SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>14638</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>14394</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SRB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>3611</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>Gasoline fired</td>
<td>Gasoline</td>
<td>gallon</td>
<td>51</td>
<td>unit less</td>
</tr>
</tbody>
</table>

**CO**

<table>
<thead>
<tr>
<th>Engine Type</th>
<th>fuel</th>
<th>Fuel unit</th>
<th>equivalent factor (EV)</th>
<th>unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>hp &lt;= 600 or mmbtu&lt;= 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>23.13</td>
<td>unit less</td>
</tr>
<tr>
<td>hp &gt;600 or mmbtu &gt; 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>19.04</td>
<td>unit less</td>
</tr>
<tr>
<td>RICE 2SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>68291</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>56084</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SRB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>658146</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>Gasoline fired</td>
<td>Gasoline</td>
<td>gallon</td>
<td>24</td>
<td>unit less</td>
</tr>
</tbody>
</table>

**PM**

<table>
<thead>
<tr>
<th>Engine Type</th>
<th>fuel</th>
<th>Fuel unit</th>
<th>equivalent factor (EV)</th>
<th>unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>hp &lt;= 600 or mmbtu&lt;= 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>66.53</td>
<td>unit less</td>
</tr>
<tr>
<td>hp &gt;600 or mmbtu &gt; 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>21.17</td>
<td>unit less</td>
</tr>
<tr>
<td>RICE 2SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>59332</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>119</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SRB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>14679</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>Gasoline fired</td>
<td>Gasoline</td>
<td>gallon</td>
<td>21</td>
<td>unit less</td>
</tr>
</tbody>
</table>

**PM10**

<table>
<thead>
<tr>
<th>Engine Type</th>
<th>fuel</th>
<th>Fuel unit</th>
<th>equivalent factor (EV)</th>
<th>unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>hp &lt;= 600 or mmbtu&lt;= 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>66.53</td>
<td>unit less</td>
</tr>
<tr>
<td>hp &gt;600 or mmbtu &gt; 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>12.13</td>
<td>unit less</td>
</tr>
<tr>
<td>RICE 2SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>74644</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>15431</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SRB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>29991</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>Gasoline fired</td>
<td>Gasoline</td>
<td>gallon</td>
<td>21</td>
<td>unit less</td>
</tr>
</tbody>
</table>

**PM2.5**

<table>
<thead>
<tr>
<th>Engine Type</th>
<th>fuel</th>
<th>Fuel unit</th>
<th>equivalent factor (EV)</th>
<th>unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>hp &lt;= 600 or mmbtu&lt;= 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>66.53</td>
<td>unit less</td>
</tr>
<tr>
<td>hp &gt;600 or mmbtu &gt; 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>11.77</td>
<td>unit less</td>
</tr>
<tr>
<td>RICE 2SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>74644</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>15431</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SRB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>29991</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>Gasoline fired</td>
<td>Gasoline</td>
<td>gallon</td>
<td>21</td>
<td>unit less</td>
</tr>
</tbody>
</table>
### Engine Type, fuel, Fuel unit, equivalency factor (EV), unit

<table>
<thead>
<tr>
<th>Engine Type</th>
<th>fuel</th>
<th>Fuel unit</th>
<th>equivalency factor (EV)</th>
<th>unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO₂</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hp &lt;= 600 or mmbtu &lt;= 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>1.0</td>
<td>unit less</td>
</tr>
<tr>
<td>hp &gt; 600 or mmbtu &gt; 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>0.06</td>
<td>unit less</td>
</tr>
<tr>
<td>RICE 2SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>15</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>15</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SRB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>15</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>Gasoline fired</td>
<td>Gasoline</td>
<td>gallon</td>
<td>0.29</td>
<td>unit less</td>
</tr>
</tbody>
</table>

(g) **Conclusion**

The Permittee has provided information as part of the application for this approval that based on Project Emissions Accounting test in 326 IAC 2-2-2 and guidance in the March 13, 2018, Memorandum “Project Emissions Accounting Under the New Source Review Preconstruction Permitting Program” that this modification to an existing major PSD stationary source will not be major because the Emissions Increase of each PSD regulated pollutant is less than the PSD significant levels (i.e., the modification does not cause a Significant Emissions Increase). The applicant will be required to keep records and report in accordance with 326 IAC 2-2-8 (Prevention of Significant Deterioration (PSD) Requirements: Source Obligation).

### PSD Emissions Increase – Project 2

The source began actual construction of the project 2019 prior to determining the Project Emissions Increase for the project. Since the Project Emissions Increase must be determined prior to the start of actual construction, the following evaluation has been conducted based on the status of each emission unit just prior to the date that actual construction began, with the baseline emissions determined from the ten (10) period immediately preceding the date that actual construction began.

(a) **Actual to Potential (ATP) Applicability Test**

Since this project only involves the construction of new emissions units and/or emissions units considered new for this evaluation, an Actual to Potential (ATP) applicability test, specified in 326 IAC 2-2-2(d)(4), is used to determine if the project results in a Significant Emissions Increase.

The following proposed emissions unit is considered as new emissions unit for this Project 2 evaluation.

One (1) shot blast unit, identified as SB1, constructed in 2019, with a maximum shot usage rate of 450 pounds per hour, using coal fired boiler slag as shot media, using dust collector filters DC1 as control, and exhausting inside.

(c) **Baseline Actual Emissions**

For a new emissions unit, the baseline actual emissions for purposes of determining the Emissions Increase that will result from the initial construction and operation of the unit shall equal zero (0) and thereafter, for all other purposes, shall equal the unit's potential to emit.

(d) **Actual to Potential (ATP) Summary**

The Emissions Increase of the project is the sum of the difference between the potential to emit (PTE) from each new emissions unit following completion of the project and the baseline actual emissions of these units before the project.

\[
ATP_{\text{new unit}} = PTE_{\text{new unit}} - \text{Baseline Emissions}_{\text{new unit}}
\]

See Appendix A of this Technical Support Document for detailed emission calculations.
### Project Emissions Increase (tons/year)

<table>
<thead>
<tr>
<th>Process/Emissions Unit</th>
<th>PM</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}^*$</th>
<th>SO$_2$</th>
<th>NO$_x$</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>shot blast unit (SB1) - PTE</td>
<td>19.71</td>
<td>13.80</td>
<td>13.80</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>shot blast unit (SB1) - Baseline Emissions</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Project Emissions Increase</strong></td>
<td>19.71</td>
<td>13.80</td>
<td>13.80</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Significant Levels</td>
<td>25</td>
<td>15</td>
<td>10</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

*PM$_{2.5}$ listed is direct PM$_{2.5}$.

The source opted to take the following PM$_{2.5}$ limit in order to render the requirements of 326 IAC 2-2 not applicable to the shot blast unit (SB1):

The PM$_{2.5}$ emissions from the shot blast unit (SB1) shall not exceed 2.26 pounds per hour.

Compliance with this limit will limit PM$_{2.5}$ PTE of the shot blast unit (SB1) to less than 10 tons per 12 consecutive month period and therefore, render the requirements of 326 IAC 2-2 (PSD) not applicable to the shot blast unit (SB1).

The dust collector filters (DC1) equipped on the shot blast unit (SB1) for particulate controls shall be in operation and control emissions when shot blast unit (SB1) is in operation, in order to comply with this limit.

### Potential to Emit After Issuance

**Entire Source (including nested boilers and all the remaining emission units)**

The table below summarizes the potential to emit of the Entire Source (including nested boilers and the remaining emission units), reflecting all limits, of the emission units. Any new control equipment is considered federally enforceable only after issuance of this Part 70 permit renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

| Potential To Emit of the Entire Source (including nested boilers and remaining emission units) After Issuance of Renewal (tons/year) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PM$^1$ | PM$_{10}^1$ | PM$_{2.5}^{1,2}$ | SO$_2$ | NO$_x$ | VOC | CO | Single HAP$^3$ | Total HAPs |
| Total PTE of Entire Source Excluding Fugitive Emissions* | >250 | <250 | <250 | >250 | >250 | >250 | <9.9 | <24.9 |
| Title V Major Source Thresholds | NA | 100 | 100 | 100 | 100 | 100 | 10 | 25 |
Potential To Emit of the Entire Source (including nested boilers and remaining emission units) After Issuance of Renewal (tons/year)

<table>
<thead>
<tr>
<th></th>
<th>PM¹</th>
<th>PM₁₀¹</th>
<th>PM₂.₅¹,²</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP³</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSD Major Source Thresholds</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>--</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Emission Offset Major Source Thresholds</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>100</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

¹Under the Part 70 Permit program (40 CFR 70), PM₁₀ and PM₂.₅, not particulate matter (PM), are each considered as a “regulated air pollutant.”
²PM₂.₅ listed is direct PM₂.₅.
³Single highest source-wide HAP.
*Fugitive HAP emissions are always included in the source-wide emissions.

The source opted to take limit(s) in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-3 (Emission Offset) not applicable to this source and to render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA). See Technical Support Document (TSD) State Rule Applicability - Entire Source section, 326 IAC 2-2 (PSD), and 326 IAC 2-3 (Emission Offset), and 326 IAC 20 (Hazardous Air Pollutants) for more information regarding the limit(s).

Appendix A of this TSD reflects the detailed potential to emit of the entire source after issuance.

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because the PSD regulated pollutants, PM, SO₂, NOₓ, VOC and CO, each, is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is a major stationary source, under Emission Offset (326 IAC 2-3), because SO₂, a nonattainment regulated pollutant, is emitted at a rate of 100 tons per year or more.

(c) This existing source is not a major source of HAPs, as defined in 40 CFR 63.2, because HAPs emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Nested source (including all boilers only)

The table below summarizes the potential to emit of the nested source (including boilers only), reflecting all limits, of the boilers. Any new control equipment is considered federally enforceable only after issuance of this Part 70 permit renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

<table>
<thead>
<tr>
<th></th>
<th>Potential To Emit of the Entire Source (including all boilers only) After Issuance of Renewal (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NOₓ</td>
</tr>
<tr>
<td>Total PTE of Nested Source including Fugitive Emissions*</td>
<td>175.131</td>
</tr>
<tr>
<td>Title V Major Source Thresholds</td>
<td>100</td>
</tr>
<tr>
<td>PSD Major Source Thresholds</td>
<td>100</td>
</tr>
</tbody>
</table>
Potential To Emit of the Entire Source (including all boilers only)  
After Issuance of Renewal (tons/year)

<table>
<thead>
<tr>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>PM1</th>
<th>PM10</th>
<th>PM2.5 1,2</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>---</td>
<td>---</td>
<td>100</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

Emission Offset Major Source Thresholds

1Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant."
2PM2.5 listed is direct PM2.5.

*Fugitive HAP emissions are always included in the source-wide emissions.

Appendix A of this TSD reflects the detailed potential to emit of the entire source after issuance.

(a) This existing nested source (boilers) is a major stationary source, under PSD (326 IAC 2-2), because the PSD regulated pollutants, NOx and CO, each, is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing nested source is not a major stationary source, under Emission Offset (326 IAC 2-3), because SO2, a nonattainment regulated pollutant, is not emitted at a rate of 100 tons per year or more.

Federal Rule Applicability

Federal rule applicability for this source has been reviewed as follows:

New Source Performance Standards (NSPS):

(a) Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

(A) Units not subject to the requirements of NSPS, Subpart Dc

(i) BLR 4 and BLR 5 are not subject to the requirements of this NSPS, Subpart Dc because these boilers were constructed before June 9, 1989, the applicability date of this NSPS, and were never modified.

(ii) BLR 7, BLR 8 and BLR 9 are not subject to the requirements of this NSPS, Subpart Dc because each of these boilers has maximum heat input capacity less than 10 MMBtu/hr.

(B) Units subject to the requirements of NSPS, Subpart Dc

BLR 1, BLR 3 and BLR 6 are subject to the requirements of this NSPS, Subpart Dc and 326 IAC 12 because these boilers were constructed after June 9, 1989, the applicability date of this NSPS and each of these boilers has maximum heat input capacity greater than 10 MMBtu per hour and less than 100 MMBtu per hour.

BLR 1, BLR 3 and BLR 6 are subject to the following portions of 40 CFR 63, Subpart Dc.

(1) 40 CFR 60.40c(a) and (b);
(2) 40 CFR 60.41c;
(3) 40 CFR 60.48c(a), (g), (i); and
(4) 40 CFR 60.67

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the BLR 1, BLR 3 and BLR 6 except as otherwise specified in 40 CFR 60, Subpart Dc.
(b) Subpart Da—Standards of Performance for Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978

Each boiler at this source has a maximum heat input capacity less than 250 MMBtu/hr. Therefore, the requirements of the NSPS, Subpart Da are not included for any boiler at this source.

(c) Subpart Db—Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

Each boiler at this source has a maximum heat input capacity less than 100 MMBtu/hr. Therefore, the requirements of the NSPS, Subpart Db are not included for any boiler at this source.

(d) Subpart III—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

(A) Engines not subject to the requirements of NSPS, Subpart III

The engines at the test cells VC1, VC2, S1 and S2 are not subject to the requirements of this NSPS, Subpart III because these engines are mobile engines.

(B) Engines subject to the requirements of NSPS, Subpart III

(i) Genset 1a, Genset 1b, 45, Engine 1, 1490 hp, 490 hp and 415 hp diesel fired emergency generators are subject to the requirements of this NSPS, Subpart III and 326 IAC 12 because these engines are Compression Ignition Internal Combustion Engines and were constructed after July 11, 2005.

(ii) Engine 1 is subject to the requirements of this NSPS, Subpart III and 326 IAC 12 because this engine is Compression Ignition Internal Combustion Engines and was constructed after July 11, 2005.

(iii) The engines at the following test cells are subject to the requirements of this NSPS, Subpart III and 326 IAC 12 because these engines have construction date after July 11, 2005:


Applicable portions of 40 CFR 60, Subpart III

(a) Genset 1a, Genset 1b, 45, 1490 hp, 490 hp and 415 hp diesel fired emergency generators are subject to the following portions of 40 CFR 60, Subpart III:

(1) 40 CFR 60.4200(a)(2)(i), (a)(4), (c), and (d);
(2) 40 CFR 60.4205(b) and (e);
(3) 40 CFR 60.4206;
(4) 40 CFR 60.4207(b);
(5) 40 CFR 60.4209;
(6) 40 CFR 60.4211(a), (c), (f)(1), (f)(2)(i), and (f)(3);
(7) 40 CFR 60.4214(b) and (c);
(8) 40 CFR 60.4218;
(9) 40 CFR 60.4219;
(10) Table 5; and
(11) Table 8.
(b) Engine 1 is subject to the following portions of 40 CFR 60, Subpart III:

1. 40 CFR 60.4200(a)(2)(ii) and (a)(4);
2. 40 CFR 60.4205(e);
3. 40 CFR 60.4206;
4. 40 CFR 60.4207(b);
5. 40 CFR 60.4208(f), (g), (h), and (i);
6. 40 CFR 60.4209(a);
7. 40 CFR 60.4210(i);
8. 40 CFR 60.4211(a), (c), (f), and (g)(2);
9. 40 CFR 60.4214(b) and (d);
10. 40 CFR 60.4218;
11. 40 CFR 60.4219;
12. Table 4 to 40 CFR 60, Subpart III;
13. Table 5 to 40 CFR 60, Subpart III; and
14. Table 8 to 40 CFR 60, Subpart III.

(c) The test cells are subject to the following portions of 40 CFR 60, Subpart III:

1. 40 CFR 60.4200(a)(2)(i), (a)(4), (b), and (d);
2. 40 CFR 60.4204(a), (b), and (d);
3. 40 CFR 60.4206;
4. 40 CFR 60.4207(b);
5. 40 CFR 60.4209(b);
6. 40 CFR 60.4211(a), (b), and (c);
7. 40 CFR 60.4214(a) and (c);
8. 40 CFR 60.4218;
9. 40 CFR 60.4219;
10. Table 1;
11. Table 5; and
12. Table 8.

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to these engines except as otherwise specified in 40 CFR 60, Subpart Dc.

Based on this evaluation, this source is subject to 40 CFR 60, Subpart III. On May 4, 2016, the U.S. Court of Appeals for the D.C. Circuit issued a mandate vacating paragraphs 40 CFR 60.4211(f)(2)(ii) - (iii) of NSPS Subpart III. Therefore, these paragraphs no longer have any legal effect and any engine that is operated for purposes specified in these paragraphs becomes a non-emergency engine and must comply with all applicable requirements for a non-emergency engine.

For additional information, please refer to the USEPA’s Guidance Memo: https://www3.epa.gov/airtoxics/icengines/docs/RICEVacaturGuidance041516.pdf

Since the federal rule has not been updated to remove these vacated requirements, the text below shows the vacated language as strikethrough text. At this time, IDEM is not making any changes to the permit’s attachment due to this vacatur. However, the permit will not reference the vacated requirements, as applicable.

40 CFR 60.4211(f)(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).
Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

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

The engines at the following test cells are subject to the requirements of this NSPS, Subpart JJJJ and 326 IAC 12 when combusting natural gas or gasoline because these engines are spark ignition internal combustion engines and have construction date after June 12, 2006:

50N, 50S, 51N, 52N, 52S, 45

These test cells are subject to the following portions of 40 CFR 60, Subpart JJJJ when combusting natural gas or gasoline:

1. 40 CFR 60.4230(a)(4), (a)(6), (b), (d), and (e);
2. 40 CFR 60.4233(a), (b), (d), (e), (f)(1 through 4), and (h);
3. 40 CFR 60.4234;
4. 40 CFR 60.4235;
5. 40 CFR 60.4243(a)(1), (b)(1), (e), and (g);
6. 40 CFR 60.4245(a);
7. 40 CFR 60.4246;
8. 40 CFR 60.4248;
9. Table 1; and
10. Table 3.

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to these engines except as otherwise specified in 40 CFR 60, Subpart JJJJ.

Based on this evaluation, this source is subject to 40 CFR 60, Subpart JJJJ. On May 4, 2016, the U.S. Court of Appeals for the D.C. Circuit issued a mandate vacating paragraphs 40 CFR 60.4243(d)(2)(ii) - (iii) of NSPS Subpart JJJJ. Therefore, these paragraphs no longer have any legal effect and any engine that is operated for purposes specified in these paragraphs becomes a non-emergency engine and must comply with all applicable requirements for a non-emergency engine.

For additional information, please refer to the USEPA’s Guidance Memo:

Since the federal rule has not been updated to remove these vacated requirements, the text below shows the vacated language as strikethrough text. At this time, IDEM is not making any
changes to the permit’s attachment due to this vacatur. However, the permit will not reference the vacated requirements, as applicable.

40 CFR 60.4243(d)(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (d)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (d)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (d)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(f) Subpart KKKK—Standards of Performance for Stationary Combustion Turbines

The turbines at the following test cells are subject to the requirements of this NSPS, Subpart KKKK and 326 IAC 12 because these turbines have heat input at peak load equal to or greater than 10 MMBtu per hour, based on the higher heating value of the fuel and have constriction date after February 18, 2005: 701 and 705

The turbines at these test cells are subject to the following portions of 40 CFR 60, Subpart KKKK:

(1) 40 CFR 60.4305
(2) 40 CFR 60.4315
(3) 40 CFR 60.4320(a)
(4) 40 CFR 60.4325
(5) 40 CFR 60.4330(a)
(6) 40 CFR 60.4333
(7) 40 CFR 60.4375
(8) 40 CFR 60.4395
(9) 40 CFR 60.4420

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to these test cells turbines except as otherwise specified in 40 CFR 60, Subpart KKKK.

(g) Subpart GG—Standards of Performance for Stationary Gas Turbines

Since the turbines at the following test cells are subject to the requirements of NSPS, Subpart KKKK, these emission units are not subject to the requirements of NSPS, Subpart GG:
(h) There are no other New Source Performance Standards (40 CFR Part 60) and 326 IAC 12 included in the permit.

**National Emission Standards for Hazardous Air Pollutants (NESHAP):**

(a) The source has requested to include source-wide single HAP and combined HAPs limits in the permit such that the potential to emit (as defined in 326 IAC 2-7-1(30)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(30)) of a combination of HAPs is less than twenty-five (25) tons per year.

In order to render the source an area source of HAP, the Permittee shall comply with the following:

The total Gasoline usage at the test cells 45, 48N, 48S, 50N, 52N, 50S and 52S shall not exceed 497.8 kilo gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with this Gasoline usage limit combined with the potential to emit HAP emissions from other emission units at the source shall limit the source-wide single HAP emissions to less than 10 and combined HAPs emissions to less than 25 tons per twelve (12) consecutive month period and shall render the source an area source of HAP.

This Gasoline usage limit is a new limit.

(b) Subpart ZZZZ—National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)

(A) Engines not subject to the requirements of NESHAP, Subpart ZZZZ

The engines at the test cells VC1, VC2, S1 and S2 are not subject to the requirements of this NSPS, Subpart IIII because these engines are mobile engines.

(B) Engines subject to the requirements of NESHAP, Subpart ZZZZ

The engines at the following test cells are subject to the requirements of this NESHAP, Subpart ZZZZ because these engines are stationary engines located at an area source of HAPs.


**Requirements for non-emergency RICE**

The Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ when using a new stationary non-emergency RICE:

(a) The Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ when a new stationary RICE, defined as a RICE that commenced construction on or after June 12, 2006 pursuant to 40 CFR 63.6590(a)(2)(iii), is installed and operated in a test cell, and the test cell exemption does not apply:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585;
(3) 40 CFR 63.6590(a)(2)(iii), and (c)(1);
(4) 40 CFR 63.6595 (a)(7);
(5) 40 CFR 63.6665;
(6) 40 CFR 63.6670; and
(7) 40 CFR 63.6675;

(b) The Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ when a diesel-fired, nonemergency, existing stationary RICE, defined as a RICE that commenced construction prior to June 12, 2006 pursuant to 40 CFR 63.6590(a)(1)(iii), with a power output of less than or equal to 300 HP, is installed and operated in a test cell, and the test cell exemption does not apply:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a), (c), (d), and (e);
(3) 40 CFR 63.6590(a)(1)(iii);
(4) 40 CFR 63.6595(a)(1) and (c);
(5) 40 CFR 63.6603(a);
(6) 40 CFR 63.6605;
(7) 40 CFR 63.6612;
(8) 40 CFR 63.6625(e)(4), (h), and (i);
(9) 40 CFR 63.6640(a) and (b);
(10) 40 CFR 63.6645(a)(2);
(11) 40 CFR 63.6655(e)(3);
(12) 40 CFR 63.6660;
(13) 40 CFR 63.6665;
(14) 40 CFR 63.6670;
(15) 40 CFR 63.6675;
(16) Table 2d (Item 1); and
(17) Table 8.

(c) The Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ when a diesel-fired, nonemergency, existing stationary RICE, defined as a RICE that commenced construction prior to June 12, 2006 pursuant to 40 CFR 63.6590(a)(1)(iii), with a power output greater than 500 HP, is installed and operated in a test cell, and the test cell exemption does not apply:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a), (c), (d), and (e);
(3) 40 CFR 63.6590(a)(1)(iii);
(4) 40 CFR 63.6595(a)(1) and (c);
(5) 40 CFR 63.6603(a), (d) and (e);
(6) 40 CFR 63.6604(a);
(7) 40 CFR 63.6605;
(8) 40 CFR 63.6612;
(9) 40 CFR 63.6615;
(10) 40 CFR 63.6620(a), (b), (d), (e), (f), (g), (h), and (i);
(11) 40 CFR 63.6625(a), (b), (g), and (h);
(12) 40 CFR 63.6630(a), (b), and (c);
(13) 40 CFR 63.6635;
(14) 40 CFR 63.6640(a), (b), and (e);
(15) 40 CFR 63.6645(a)(2), (g), (h), and (i);
(16) 40 CFR 63.6650(a), (b), (c), (d), (e), and (f);
(17) 40 CFR 63.6655(a), (b), (d), and (e);
(18) 40 CFR 63.6665;
(19) 40 CFR 63.6670;
(20) 40 CFR 63.6675;
(21) Table 2b (item 2 and 3);
(22) Table 2d (item 3);
(23) Table 3 (item 4);
(24) Table 4 (item 1 and 3);
(25) Table 5 (item 1, 2, 3, 4, 5, and 6);
(26) Table 6 (item 3, 10, and 11); and
(27) Table 8.

Pursuant to 40 CFR 63.6665, new diesel-fired engines used at the Transmission test cells 701, 704, 705, 706, 707, 709, 710, 711, 712, 32N, 32S, 38N, 39N, 39S, 41N, 41S, 48N, 48S, 49N, 49S, 50N, 50S, 51N, 52N, 52S, 107, 109, 111, 112, O-2, O-24, O-25, O-31, 702, ETC55, and ETC53 do not have to meet the requirements of 40 CFR 63, Subpart A (General Provisions), since they each would be considered a new stationary RICE located at an area source of HAP emissions.

Pursuant to 40CFR 63.6590(c)(1), new or reconstructed RICE located at an area source must meet the requirements of this NESHAP by meeting the requirements of 40 CFR part 60 subpart III, for compression ignition engines or 40 CFR part 60, subpart JJJJ, for spark ignition engines. No further requirements apply to these engines under this NESHAP.

Requirements emergency RICE

All emergency RICE at this source commenced construction on or after June 12, 2006. Therefore, these emergency RICE are considered new emergency RICE.

(a) The Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ when a compression ignition, emergency, new stationary RICE, defined as a RICE that commenced construction on or after June 12, 2006 pursuant to 40 CFR 63.6590(a)(2)(iii) is installed:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a), (c), and (e);
(3) 40 CFR 63.6590(a)(2)(iii) and (c)(1);
(4) 40 CFR 63.6595(a)(6), (a)(7), and (c);
(5) 40 CFR 63.6605;
(6) 40 CFR 63.6650(f);
(7) 40 CFR 63.6665;
(8) 40 CFR 63.6670;
(9) 40 CFR 63.6675; and
(10) Table 8.

(b) The Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ when a compression ignition, emergency, existing stationary RICE, defined as a RICE that commenced construction before June 12, 2006 pursuant to 40 CFR 63.6590(a)(1)(iii) is installed:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a), (c), and (e);
(3) 40 CFR 63.6590(a)(1)(iii);
(4) 40 CFR 63.6595(a)(1);
(5) 40 CFR 63.6603(a);
(6) 40 CFR 63.6605;
(7) 40 CFR 63.6625(e)(5), (f), (h), and (i);
(8) 40 CFR 63.6640(a), (b), (e), (f)(1), (f)(2)(i), and (f)(4);
(9) 40 CFR 63.6645(a)(5);
(10) 40 CFR 63.6650(f);
(11) 40 CFR 63.6655(d) and (e)(2);
(12) 40 CFR 63.6660;
(13) 40 CFR 63.6665;
(14) 40 CFR 63.6670;
(15) 40 CFR 63.6675;
(16) Table 2d (item 4); and
(17) Table 6 (item 9).

Pursuant to 40CFR 63.6590(c)(1), new or reconstructed RICE located at an area source must meet the requirements of this NESHAP by meeting the requirements of 40 CFR part 60 subpart III, for compression ignition engines or 40 CFR part 60, subpart JJJJ, for spark ignition engines. No further requirements apply to these engines under this NESHAP.

Based on this evaluation, this source is subject to 40 CFR 63, Subpart ZZZZ. On May 4, 2016, the U.S. Court of Appeals for the D.C. Circuit issued a mandate vacating paragraphs 40 CFR 63.6640(f)(2)(i) - (iii) of NESHAP Subpart ZZZZ. Therefore, these paragraphs no longer have any legal effect and any engine that is operated for purposes specified in these paragraphs becomes a non-emergency engine and must comply with all applicable requirements for a non-emergency engine.

For additional information, please refer to the USEPA’s Guidance Memo:

Since the federal rule has not been updated to remove these vacated requirements, the text below shows the vacated language as strikethrough text. At this time, IDEM is not making any changes to the permit’s attachment due to this vacatur. However, the permit will not reference the vacated requirements, as applicable.

40 CFR 63.6640(f)(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(c) Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

The requirements of the NESHAP, DDDDD are not included in the permit for the boilers at this source because this source is an area source of HAPs.

(c) Subpart CCCCCC—National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

A gasoline fuel transfer dispensing operation is subject to the requirements of this NESHAP, Subpart CCCCCC because the gasoline from the storage tank is dispensed into the motor vehicle. This gasoline fuel transfer dispensing operation was installed prior November 9, 2006, therefore, this facility is considered existing affected source.

The gasoline fuel transfer dispensing operation is subject to the following portions of Subpart CCCCCC for existing affected source:

(1) 40 CFR 63.1111(a) and (b)
(2) 40 CFR 63.11112(a) and (d)
(3) 40 CFR 63.11113(b)
(4) 40 CFR 63.11115
(5) 40 CFR 63.11116
(6) 40 CFR 63.11125(d)
(7) 40 CFR 63.11126(b)
(8) 40 CFR 63.11130
(9) 40 CFR 63.11132
(10) Table 3

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63, CCCCCC.

(d) Subpart WWWWWW—National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations

The manganese phosphate tank (Dept. 1492 tank F3) is subject to the requirements of this NSPS, Subpart CCCCCC because it is manganese phosphate coating operation located at an area source of HAPs. All other tanks at the source do not use any compound of cadmium, chromium, lead, manganese, and nickel.

The manganese phosphate tank (Dept. 1492 tank F3) is subject to the following portions of Subpart WWWWWW:

(1) 40 CFR 63.11504(a)(1)(iii);
(2) 40 CFR 63.11505(a) and (b);
(3) 40 CFR 63.11506(a);
(4) 40 CFR 63.11507(a) and (g);
(5) 40 CFR 63.11508(a), (b), (c)(1) and (2), and (d);
(6) 40 CFR 63.11509(a)(1)-(3), (b), (c)(1), (c)(2)(i), (c)(7), (d), (e), and (f);
(7) 40 CFR 63.11510;
(8) 40 CFR 63.11511;
(9) Table 1.
The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the manganese phosphate tank (Dept. 1492 tank F3) except when otherwise specified in 40 CFR 63, WWWWWW.

(e) Subpart JJJJJJ—National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

All boilers at this source are considered gas-fired boiler under this NESHAP, therefore, these boiler are not subject to the requirements of this NESHAP, JJJJJJ.

(f) Subpart XXXXXX — National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories

The SIC codes of 3714 is not one of the SIC codes listed in the EPA November 2011 Questions & Answers document related to applicability determination of the 40 CFR Part 63 Subpart XXXXXX (Nine Metal Fabrication and Finishing Area Source Categories) http://www.epa.gov/ttn/atw/area/arearules.html#imp. Therefore, the source is not subject to the requirements of this NESHAP.

(g) There are no other National Emission Standards for Hazardous Air Pollutants under 40 CFR 63, 326 IAC 14 and 326 IAC 20 included in the permit.

Compliance Assurance Monitoring (CAM):

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing pollutant-specific emission unit that meets the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the regulated pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant (or a surrogate thereof); and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

(b) Pursuant to 40 CFR 64.2(b)(1)(i), emission limitations or standards proposed after November 15, 1990 pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act are exempt from the requirements of CAM. Therefore, an evaluation was not conducted for any emission limitations or standards proposed after November 15, 1990 pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act.

(d) Pursuant to 40 CFR 64.3(d), if a continuous emission monitoring system (CEMS) is required pursuant to other federal or state authority, the owner or operator shall use the CEMS to satisfy the requirements of CAM according to the criteria contained in 40 CFR 64.3(d).

The following table is used to identify the applicability of CAM to each emission unit and each emission limitation or standard for a specified pollutant based on the criteria specified under 40 CFR 64.2:

<table>
<thead>
<tr>
<th>Emission Unit/Pollutant</th>
<th>Control Device</th>
<th>Applicable Emission Limitation</th>
<th>Uncontrolled PTE (tons/year)</th>
<th>Controlled PTE (tons/year)</th>
<th>CAM Applicable (Y/N)</th>
<th>Large Unit (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>O-2, CO</td>
<td>oxidation catalyst</td>
<td>N</td>
<td>&lt;100</td>
<td>&lt;100</td>
<td>N (1)</td>
<td>NA</td>
</tr>
<tr>
<td>O-31, CO</td>
<td>oxidation catalyst</td>
<td>N</td>
<td>&lt;100</td>
<td>&lt;100</td>
<td>N (1)</td>
<td>NA</td>
</tr>
<tr>
<td>BLR 1, NOx</td>
<td>low NOx Burner</td>
<td>N</td>
<td>&lt;100</td>
<td>&lt;100</td>
<td>N (1)</td>
<td>NA</td>
</tr>
<tr>
<td>BLR 3, NOx</td>
<td>low NOx Burner</td>
<td>N</td>
<td>&lt;100</td>
<td>&lt;100</td>
<td>N (1)</td>
<td>NA</td>
</tr>
</tbody>
</table>
### Emission Unit/Pollutant

<table>
<thead>
<tr>
<th></th>
<th>Control Device</th>
<th>Applicable Emission Limitation</th>
<th>Uncontrolled PTE (tons/year)</th>
<th>Controlled PTE (tons/year)</th>
<th>CAM Applicability (Y/N)</th>
<th>Large Unit (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>heat treat furnaces, CO</td>
<td>pilot burner</td>
<td>N</td>
<td>&lt;100</td>
<td>&lt;100</td>
<td>N (1)</td>
<td>NA</td>
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<tr>
<td>PAINT98, PM</td>
<td>dry filters</td>
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<td>&lt;100</td>
<td>&lt;100</td>
<td>N (1)</td>
<td>NA</td>
</tr>
<tr>
<td>SB1, PM and PM10</td>
<td>filter</td>
<td>N</td>
<td>&lt;100</td>
<td>&lt;100</td>
<td>N (1)</td>
<td>NA</td>
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<tr>
<td>SB1, PM2.5</td>
<td>filter</td>
<td>Y</td>
<td>&lt;100</td>
<td>&lt;100</td>
<td>N (1)</td>
<td>NA</td>
</tr>
</tbody>
</table>

Uncontrolled PTE (tpy) and controlled PTE (tpy) are evaluated against the Major Source Threshold for each pollutant. Major Source Threshold for criteria pollutants (PM10, PM2.5, SO2, NOx, VOC and CO) is 100 tpy, for a single HAP ten (10) tpy, and for total HAPs twenty-five (25) tpy.

Under the Part 70 Permit program (40 CFR 70), PM is not a regulated pollutant.

N (1) CAM does not apply for pollutant because the uncontrolled PTE of pollutant is less than the major source threshold.

Emission units without air pollution controls are not subject to CAM. Therefore, they are not listed.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM, are not applicable to any of the existing, new and modified units as part of this modification.

### State Rule Applicability - Entire Source

State rule applicability for this source has been reviewed as follows:

#### 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset)

PSD and Emission Offset applicability is discussed under the Potential to Emit After Issuance section of this document.

This existing major PSD stationary source will continue to be major under 326 IAC 2-2 because the PSD regulated pollutants, PM, SO2, NOx, VOC and CO, each, has emissions equal to or greater than the PSD major source threshold.

This existing major Emission Offset stationary source will continue to be major under 326 IAC 2-3 because the emissions of the nonattainment pollutant, SO2, will continue to be equal to or greater than the Emission Offset major source threshold.

### Existing PSD Minor Limits

(a) In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the Permittee shall comply with the limits specified in the table below:

<table>
<thead>
<tr>
<th>Test Cell</th>
<th>NOx Limit</th>
<th>Fuel Usage Limit NOx</th>
<th>VOC Limit</th>
<th>CO Limit</th>
<th>SO2 Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>39N</td>
<td>40 tpy (due to diesel only)</td>
<td>182,481 gallons of diesel per year</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>50N, 52N, 50S, and 52S</td>
<td>40 tpy total (due to all type of fuel)</td>
<td>--</td>
<td>40 tpy total</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>107, 109, 111 and 112</td>
<td>40 tpy total (due to diesel only)</td>
<td>182,481 gallons of diesel per year, total</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>O-2</td>
<td>40 tpy (due to diesel only)</td>
<td>182,481 gallons of diesel per year</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>O-24 and O-25</td>
<td>40 tpy total (due to diesel only)</td>
<td>182,481 gallons of diesel per year, total</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>O-31</td>
<td>40 tpy (due to diesel only)</td>
<td>182,481 gallons of diesel per year</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>
(b) In order to assure that the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) are not applicable, the Permittee shall comply with the following for the twenty-five (25) heat treat furnaces:

(i) Each integral pilot burner, which are each located at the effluent of the heat treat furnace vestibule, shall be in operation and control CO emissions from the respective heat treat furnace at all times when the respective heat treat furnace is in operation.

(ii) Each integral flame curtain associated with a heat treat furnace shall be in operation at all times when the respective heat treat furnace outer door is open.

Compliance with the limits in paragraph (a) and (b) above shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

**Existing Nonattainment NSR Minor Limit**

In order to render to ensure compliance with 326 IAC 2-1.1-5, the Permittee shall comply with the following for ETC55:

SO2 emissions from diesel fuel fired reciprocating engines utilized in ETC55 shall be less than forty (40) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit shall ensure compliance with 326 IAC 2-1.1-5 (Nonattainment NSR) for ETC55.

**Proposed new limits**

(a) The source has opted to take fuel usage limit in order to render the requirements of 326 IAC 2-2 not applicable to this proposed Project 1 modification. These limits are specified in “Permit Level Determination – PSD Emissions Increase” section of this TSD. Please refer this section for the details of these limits. Compliance with these limits shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to the proposed Project 1 modification.

(b) The source has opted to take PM2.5 limit in order to render the requirements of 326 IAC 2-2 not applicable to the proposed Project 2 modification (shot blast unit (SB1)). This limit is specified in “Permit Level Determination – PSD Emissions Increase” section of this TSD. Please refer this section for the details of this limit. Compliance with this limit shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to the proposed Project 2 modification.

**326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))**

The operation of this source will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

**326 IAC 2-6 (Emission Reporting)**

This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7 (Part 70). The potential to emit of NOx is greater than 2,500 tons per year. Therefore, pursuant to 326 IAC 2-6-3(a)(1), annual reporting is required. An emission statement shall be submitted in accordance with the compliance schedule in 326 IAC 2-6-3 and every year thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.
326 IAC 2-7-6(5) (Annual Compliance Certification)
The U.S. EPA Federal Register 79 FR 54978 notice does not exempt Title V Permittees from the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D), but the submittal of the Title V annual compliance certification to IDEM satisfies the requirement to submit the Title V annual compliance certifications to EPA. IDEM does not intend to revise any permits since the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D) still apply, but Permittees can note on their Title V annual compliance certifications that submission to IDEM has satisfied reporting to EPA per Federal Register 79 FR 54978. This only applies to Title V Permittees and Title V compliance certifications.

326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1).

326 IAC 6-4 (Fugitive Dust Emissions Limitations)
The source is subject to the requirements of 326 IAC 6-4, because the Paved and unpaved roads have the potential to emit fugitive particulate emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
This source is not subject to the requirements of 326 IAC 6-5, because the source has potential fugitive particulate emissions of less than twenty-five (25) tons per year.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
326 IAC 6.5 applies to sources or facilities located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties. Sources specifically listed in the rule shall comply with the limitations in 326 IAC 6.5-2 through 326 IAC 6.5-10, as applicable. Sources not specifically listed in 326 IAC 6.5-2 through 326 IAC 6.5-10 shall comply with 326 IAC 6.5-1-2, if they have the potential to emit ten (10) tons or more of particulate matter (PM) and are not taking a limit of less than ten (10) tons of particulate matter (PM).

This source, located in Marion County, and has the potential to emit ten (10) tons or more of particulate matter (PM) and is not taking a limit of less than ten (10) tons of particulate matter (PM). Therefore, 326 IAC 6.5 applies and the requirements are included in the permit.

(A) Emission units not subject to the requirements of 326 IAC 6.5

(a) PAINT98 and two (2) maintenance paint booths are not subject to the requirements of this rule because these surface coating operations use less than five (5) gallons of coating per day.

(c) VC1, VC2, S1, S2 are subject to the requirements of 326 IAC 6.5 because these emission units are mobile sources, not stationary source.

(B) Emission units subject to the requirements of 326 IAC 6.5

(a) Pursuant to 326 IAC 6.5-1-2(a), particulate (PM) emissions from the following shall not exceed three hundredths (0.03) grains per dry standard cubic foot of exhaust air:

(i) Test cell engines and generators as follows:

(ii) shot blast unit (SB1)
(iii) all furnaces
(iv) Grinding and machining operations
(v) Production welding
(vi) all cooling towers
(vii) all Space heaters and process heaters

The dust collector filters (DC1) equipped on the shot blast unit (SB1) for particulate controls shall be in operation and control emissions when shot blast unit (SB1) is in operation, in order to comply with the above 326 IAC 6.5-1-2(a) limit for the shot blast unit (SB1).

(b) Pursuant to 326 IAC 6.5-6-2(a), particulate (PM) emissions from emission units BLR 4 and BLR 5 shall not exceed:

1. 0.15 pounds per million Btu for each emission unit; and
2. 39.3 tons per year for all emission units combined.

Pursuant to 326 IAC 6.5-6-2(b), compliance with the particulate (PM) emissions for the BLR 4 and BLR 5 shall be determined at the end of each month based on the sum of the monthly calculated emissions for the most recent twelve (12) consecutive month period. The monthly emissions shall be calculated using AP-42 emissions factors or alternative emission factors approved by the Commissioner.

(c) Pursuant to 326 IAC 6.5-1-2(b)(3), particulate (PM) emissions from the BLR 1, BLR 3, BLR 6, BLR 7, BLR 8 and BLR 9 shall not exceed one hundredths (0.01) grains per dry standard cubic foot of exhaust air.

Although the BLR 7, BLR 8 and BLR 9 are subject to the requirements of this NSPS, Subpart Dc because, the limits under 326 IAC 6.5-1-2(a) rule is more stringent limit than the NSPS, Subpart Dc limits. Therefore, BLR 7, BLR 8 and BLR 9 are subject to the requirements of 326 IAC 6.5-1-2(a) limit.

326 IAC 20 (Hazardous Air Pollutants)
In order to render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA), the Permittee has taken a Gasoline usage limit. Please refer section of this TSD for the details of this limit.

Compliance with this limit, combined with the potential to emit HAP from all other emission units at the source, shall limit the source-wide potential to emit single HAP to less than 10 tons per twelve (12) consecutive month period and the source-wide potential to emit total HAPs to less than 25 tons per twelve (12) consecutive month period, and shall render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA).

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

(a) Emission units subject to the requirements of 326 IAC 7-1.1

The following Test Cells are subject to 326 IAC 326 IAC 7-1.1 because each of these emission units has potential to emit sulfur dioxide (SO2) equal to or greater than 25 tons per year or 10 pounds per hour:
701, 704, 705, 706, 707, 709, 711, 32N, 38N, 53N, 53S, 39N, 45, 51N, O-2, O-31, 702 and 55
Pursuant to 326 IAC 7-1.1-1 (SO₂ Emissions Limitations), Sulfur Dioxide (SO₂) emissions from these Test Cells shall each not exceed five tenths (0.5) pounds per million Btu heat input when combusting diesel fuel.

Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

This SO₂ limit is a new limit for the test cells 39N, 45, 51N, O-2, O-31 and 702.

(b) Emission units not subject to the requirements of 326 IAC 7-1.1

All of the emission units at the source, not specified in paragraph (a) above and the proposed modified cells 48N and 48S, are not subject to 326 IAC 326 IAC 7-1.1 because these emission units have potential to emit (or limited potential to emit) sulfur dioxide (SO₂) of less than 25 tons per year or 10 pounds per hour.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)

(a) The unlimited potential VOC emissions from the each of the test cells 45, 48N, 48S, 50N, 52N, 50S and 52S are more than twenty-five (25) tons per year and were constructed after 1979. There are no limitations and standards specified in 326 IAC 8 for these types of operations. The requirements of 326 IAC 8-1-6 would apply to these facilities. However, the Permittee has opted to take limits to render 326 IAC 8-1-6 BACT not applicable. These limits are specified below:

The VOC emission from each of the test cells 45, 48N, 48S, 50N, 52N, 50S and 52S shall not exceed 24.9 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above limit shall limit shall render the requirements of 326 IAC 8-1-6 (New facilities, general reduction requirements) not applicable to these Test cells.

This VOC limit is a new limit for the test cells 45, 48N, 48S, 50N, 52N, 50S and 52S.

(b) All of the emission units at the source, not specified in paragraph (a) above, are not subject to 326 IAC 8-1-6 because these emission units have VOC potential emissions less than 25 tons per year. There are no other 326 IAC 8 rules that are applicable to these types of processes.

326 IAC 8-3-2 (Cold cleaner degreaser control equipment and operating requirements)
The units labeled as cold solvent degreasing units in the permit are not actually used for solvent parts cleaning and therefore, are not subject to the requirements of 326 IAC 8-3. The source considers these units Quality Control washdown units, with the process described as follows: Metal parts are cleaned, typically using a water based conveyor washer (there are no solvents used in this process) and then prior to final assembly, the parts go through a Sediment Analysis Procedure, in which the wash down units are used. The Sediment Analysis Procedure is a quality control process in which a cleaned part is chosen at random, and the part is weighed, washed down in the washdown unit, and weighed again to ensure that the parts were cleaned properly without any residue remaining. This washdown process is a quality control procedure to ensure that the cleaning process is robust enough to send the parts on to assembly without detrimental contamination. Therefore, the process is a QA/QC process and not a solvent degreasing or cleaning operation and as such, it would not be subject to the degreasing requirements found at 326 IAC 8-3.

326 IAC 9-1 (Carbon Monoxide Emission Limits)
The requirements of 326 IAC 9-1 do not apply to this source, because this source does not operate a catalyst regeneration petroleum cracking system or a petroleum fluid coker, grey iron cupola, blast furnace, basic oxygen steel furnace, or other ferrous metal smelting equipment.
326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories)
The requirements of 326 IAC 10-3 do not apply to the source because this source does not have any blast furnace gas-fired boiler, a Portland cement kiln, or a facility specifically listed under 326 IAC 10-3-1(a)(2).

326 IAC 10-5 (Nitrogen Oxide Reduction Program for Internal Combustion Engines (ICE))
The requirements of 326 IAC 10-5 do not apply to the source because this source does not have any NOx SIP Call engine.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to assure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source’s failure to take the appropriate corrective actions within a specific time period.

(a) The Compliance Determination Requirements applicable to this source are as follows:

(A) The Permittee shall calculate the monthly:

(i) NOX emissions from the test cells 39N, 50N, 52N, 50S, and 52S, 107, 109, 111, 112, O-2, O-24, O-25, O-31, 53, 702 and 55

(ii) VOC emissions from the test cells 45, 48N, 48S, 50N, 52N, and 52S

(iii) CO and SO2 emissions from the test cell 55

The detailed methodology to calculate these emissions are specified in the permit.

(B) The dust collector filters (DC1) equipped on the shot blast unit (SB1) for particulate controls shall be in operation and control emissions when shot blast unit (SB1) is in operation, in order to comply with the particulate limits for the shot blast unit (SB1).

(b) The Compliance Monitoring Requirement applicable to this source is as follows:

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Control Device</th>
<th>Type of Parametric Monitoring</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>shot blast unit (SB1)</td>
<td>dust collector filters (DC1)</td>
<td>Pressure drop monitoring</td>
<td>Daily</td>
</tr>
</tbody>
</table>

This monitoring condition is necessary because the dust collector filters (DC1) for the SB1 must operate properly to assure compliance with the 326 IAC 6.5 (Particulate Emissions Limitations Except Lake County) and PSD minor limits for the SB1.
Proposed Changes to the D and E section of the existing permit conditions

The changes to the D and E section of the existing permit conditions are shown below. Deleted language appears as strikethrough text and new language appears as bold text:

...  

D.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for emission units BLR 4 these facilities and BLR 5 their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

...  

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

**Emission Unit Descriptions:**

(c) Emission Unit ETC consists of the following twenty-five (25) six (26) engineering development transmission test cells; 701, 704, 705, 706, 707, 709, 710, 711, 712, 32N, 32S, 38N, 39N, 39S, 41N, 41S, 48N, 48S, 49N, 49S, 50N, 50S, 51N, 52N and 52S. The table below lists the fuel type and engine type that each cell is capable of accommodating based on the physical characteristics of each cell. Test cell 704 utilizes an oxidation catalyst system to control CO emissions.

<table>
<thead>
<tr>
<th>Test Cell ID</th>
<th>Construction Dates</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>Stack ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>48N</td>
<td>prior 1977 (approved in 2020 for modification)</td>
<td>Diesel, <strong>Natural Gas, Gasoline</strong></td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 040</td>
</tr>
<tr>
<td>48S</td>
<td>prior 1977 (approved in 2020 for modification)</td>
<td>Diesel, <strong>Natural Gas, Gasoline</strong></td>
<td>Reciprocating</td>
<td>1200</td>
<td>PTE 041</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>51N</td>
<td>prior 1977 (approved in 2020 for modification)</td>
<td>Diesel</td>
<td>Reciprocating</td>
<td><strong>42004000</strong></td>
<td>PTE 084</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>
Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Particulate Matter Limitations Except Lake County [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate (PM) emissions from each of the twenty-five (25) Test Cells covered under Emissions Unit ETC (except test cells 50N, 50S, 52N, and 52S while combusting diesel fuel) shall not exceed three hundredths (0.03) grains per dry standard cubic foot of exhaust air.

D.2.2 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1]

Pursuant to 326 IAC 7-1.1-1 (SO2 Emissions Limitations), Sulfur Dioxide (SO2) emissions from Test Cells 701, 704, 705, 706, 707, 709, 711, 32N, 38N, 39N, 45 and 51N shall each not exceed five tenths (0.5) pounds per million Btu heat input.

D.2.4 PSD Minor Limits of PM, PM10, PM2.5, NOx, VOC and CO and Emission Offset Minor Limit of SO2 [326 IAC 2-2] [326 IAC 2-3]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-3 (Emission Offset) not applicable to Test Cells 45, 48N, 48S and 51N, the Permittee shall comply with the following:

(a) For each pollutant the diesel equivalent usage input shall be less than the stated value.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>diesel equivalent usage (gallons per twelve consecutive month period)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>1,378,691</td>
</tr>
<tr>
<td>VOC</td>
<td>9,888,979</td>
</tr>
<tr>
<td>CO</td>
<td>37,536,648</td>
</tr>
<tr>
<td>PM</td>
<td>74,263,780</td>
</tr>
<tr>
<td>PM10</td>
<td>46,215,352</td>
</tr>
<tr>
<td>PM2.5</td>
<td>32,225,819</td>
</tr>
<tr>
<td>SO2</td>
<td>1,991,596</td>
</tr>
</tbody>
</table>

(b) Test Cell 45 diesel equivalent usage shall be based upon the total amount of fuel (natural gas, gasoline, propane, and diesel) combusted.

(c) Test Cell 51 diesel equivalent usage shall be based upon the amount of diesel fuel consumed when testing an engine with rating greater than 1200 HP.

(d) Test Cell 48N and 48S diesel equivalent usage shall be based upon the total amount of natural gas and gasoline combusted.

Diesel Fuel-Fired EPA Certified Engine - Diesel Equivalent Usage:
(e) When testing a diesel-fired engine certified to meet an EPA emission factor, the diesel equivalent usage shall be computed based on the following formula:

\[ F_{Ce(Pollutant)} = FC \times \left( \frac{EF_{ACTUAL}}{EF_{BENCMARK}} \right) (g/hp-hr) \]

Where:

- \( F_{Ce(Pollutant)} \) = diesel equivalent usage (gallons) per pollutant as listed in D.2.4(a)
- \( FC \) = actual fuel use (gallons of diesel)
- \( EF_{ACTUAL} \) = EPA emission factor for engine tested (g/hp-hr)
- \( EF_{BENCMARK} \) = EPA emission factor benchmark (g/hp-hr)

<table>
<thead>
<tr>
<th>( EF_{BENCMARK} ) (g/hp-hr)</th>
<th>Pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.083</td>
<td>NOx</td>
</tr>
<tr>
<td>0.14</td>
<td>VOC</td>
</tr>
<tr>
<td>0.131</td>
<td>CO</td>
</tr>
<tr>
<td>0.015</td>
<td>PM</td>
</tr>
<tr>
<td>0.015</td>
<td>PM10</td>
</tr>
<tr>
<td>0.015</td>
<td>PM2.5</td>
</tr>
<tr>
<td>0.929</td>
<td>SO\textsubscript{2}</td>
</tr>
</tbody>
</table>

For an EPA Certified Engine, the actual emission factor (\( EF_{ACTUAL} \)) shall be the EPA emission factor the engine is certified to meet.

Natural Gas-Fired EPA Certified Engine - Diesel Equivalent Usage:

(f) When testing a natural gas-fired engine certified to meet an EPA emission factor, the diesel equivalent usage shall be computed based on the following formula:

\[ F_{Ce} = FC \times 7299 \times \left( \frac{EF_{ACTUAL}}{EF_{BENCMARK}} \right) (g/hp-hr) \]

Where:

- \( F_{Ce(Pollutant)} \) = diesel equivalent usage (gallons) per pollutant as listed in D.2.4(a)
- \( FC \) = actual fuel use (mmscf of natural gas)
- 7299 = adjustment factor (gallon diesel/mmscf natural gas)
- \( EF_{ACTUAL} \) = EPA emission factor for engine tested (g/hp-hr)
- \( EF_{BENCMARK} \) = EPA emission factor benchmark (g/hp-hr)

<table>
<thead>
<tr>
<th>( EF_{BENCMARK} ) (g/hp-hr)</th>
<th>Pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.083</td>
<td>NOx</td>
</tr>
<tr>
<td>0.14</td>
<td>VOC</td>
</tr>
<tr>
<td>0.131</td>
<td>CO</td>
</tr>
<tr>
<td>0.015</td>
<td>PM</td>
</tr>
<tr>
<td>0.015</td>
<td>PM10</td>
</tr>
<tr>
<td>0.015</td>
<td>PM2.5</td>
</tr>
<tr>
<td>0.929</td>
<td>SO\textsubscript{2}</td>
</tr>
</tbody>
</table>

For an EPA Certified Engine, the actual emission factor (\( EF_{ACTUAL} \)) shall be the EPA emission factor the engine is certified to meet.

Propane-Fired EPA Certified Engine - Diesel Equivalent Usage:

(g) When testing a propane-fired engine certified to meet an EPA emission factor, the diesel equivalent usage shall be computed based on the following formula:

\[ F_{Ce} = FC \times 17,306 \times \left( \frac{EF_{ACTUAL}}{EF_{BENCMARK}} \right) (g/hp-hr) \]
Where:

\[
F_{Ce(Pollutant)} = \text{diesel equivalent usage (gallons) per pollutant as listed in D.2.4(a)}
\]

\[
F_C = \text{actual fuel use (mmscf of propane)}
\]

\[
17,306 = \text{adjustment factor (gallon diesel/mmscf propane)}
\]

\[
F_{E_{\text{FACTUAL}}} = \text{EPA emission factor for engine tested (g/hp-hr)}
\]

<table>
<thead>
<tr>
<th>EF_{BENCMARK} (g/hp-hr)</th>
<th>Pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.083</td>
<td>NOx</td>
</tr>
<tr>
<td>0.14</td>
<td>VOC</td>
</tr>
<tr>
<td>0.131</td>
<td>CO</td>
</tr>
<tr>
<td>0.015</td>
<td>PM</td>
</tr>
<tr>
<td>0.015</td>
<td>PM10</td>
</tr>
<tr>
<td>0.015</td>
<td>PM2.5</td>
</tr>
<tr>
<td>0.929</td>
<td>SO₂</td>
</tr>
</tbody>
</table>

For an EPA Certified Engine, the actual emission factor (\(E_{\text{FACTUAL}}\)) shall be the EPA emission factor the engine is certified to meet.

**Gasoline-Fired EPA Certified Engine - Diesel Equivalent Usage:**

(h) When testing a gasoline-fired engine certified to meet an EPA emission factor, the diesel equivalent usage shall be computed based on the following formula:

\[
F_{Ce} = F_C \times 0.56 \times (E_{\text{FACTUAL}} / EF_{BENCMARK} \text{ (g/hp-hr)})
\]

Where:

\[
F_{Ce(Pollutant)} = \text{diesel equivalent usage (gallons) per pollutant as listed in D.2.4(a)}
\]

\[
F_C = \text{actual fuel use (gallons gasoline)}
\]

\[
0.56 = \text{adjustment factor (gallon diesel/gallon gasoline)}
\]

\[
E_{\text{FACTUAL}} = \text{EPA emission factor for engine tested (g/hp-hr)}
\]

<table>
<thead>
<tr>
<th>EF_{BENCMARK} (g/hp-hr)</th>
<th>Pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.083</td>
<td>NOx</td>
</tr>
<tr>
<td>0.14</td>
<td>VOC</td>
</tr>
<tr>
<td>0.131</td>
<td>CO</td>
</tr>
<tr>
<td>0.015</td>
<td>PM</td>
</tr>
<tr>
<td>0.015</td>
<td>PM10</td>
</tr>
<tr>
<td>0.015</td>
<td>PM2.5</td>
</tr>
<tr>
<td>0.929</td>
<td>SO₂</td>
</tr>
</tbody>
</table>

For an EPA Certified Engine, the actual emission factor (\(E_{\text{FACTUAL}}\)) shall be the EPA emission factor the engine is certified to meet.

**Engine that is not EPA certified - Diesel Equivalent Usage:**

(i) When testing an engine not certified to meet an EPA emission factor the following shall be used:

\[
F_{Ce} = F_C \times EV
\]

Where:
FCe(Pollutant) = diesel equivalent usage (gallons) per pollutant as listed in D.2.4(a)

FC = actual fuel use (units from following table)

EV = equivalency factor (from following table)

<table>
<thead>
<tr>
<th>Engine Type</th>
<th>fuel</th>
<th>Fuel unit</th>
<th>equivalency factor (EV)</th>
<th>unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
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<td>hp &lt;= 600 or mmbtu &lt;= 4.2</td>
<td>Diesel</td>
<td>gallon</td>
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<td>hp &gt; 600 or mmbtu &gt; 4.2</td>
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<tr>
<td>RICE 2SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
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<td>gal/mmscf</td>
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<td>Natural gas or Propane</td>
<td>mmscf</td>
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<td>mmscf</td>
<td>24590</td>
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</tr>
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<td>Gasoline fired</td>
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<td>gallon</td>
<td>2</td>
<td>unit less</td>
</tr>
<tr>
<td>VOC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hp &lt;= 600 or mmbtu &lt;= 4.2</td>
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<td>gal/mmscf</td>
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<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>3611</td>
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</tr>
<tr>
<td>Gasoline fired</td>
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<td>gallon</td>
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<td>unit less</td>
</tr>
<tr>
<td>CO</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>658146</td>
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<tr>
<td>Gasoline fired</td>
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<td>gallon</td>
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<td>PM</td>
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<td></td>
</tr>
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<td>unit less</td>
</tr>
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<td>gal/mmscf</td>
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<td>mmscf</td>
<td>119</td>
<td>gal/mmscf</td>
</tr>
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<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>14679</td>
<td>gal/mmscf</td>
</tr>
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<td>21</td>
<td>unit less</td>
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<td>PM10</td>
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<td>gallon</td>
<td>66.53</td>
<td>unit less</td>
</tr>
<tr>
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<tr>
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<td>mmscf</td>
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<tr>
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<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>15431</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SRB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>29991</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>Gasoline fired</td>
<td>Gasoline</td>
<td>gallon</td>
<td>21</td>
<td>unit less</td>
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<td>PM2.5</td>
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<td></td>
<td></td>
</tr>
<tr>
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<td>66.53</td>
<td>unit less</td>
</tr>
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<td>Engine Type</td>
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<td>Fuel unit</td>
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<td>----------</td>
</tr>
<tr>
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<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SLB</td>
<td>Natural gas or Propane</td>
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<td>15431</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SRB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>29991</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>Gasoline fired</td>
<td>Gasoline</td>
<td>gallon</td>
<td>21</td>
<td>unit less</td>
</tr>
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</table>

\[
\text{SO}_2
\]

<table>
<thead>
<tr>
<th>Engine Type</th>
<th>fuel</th>
<th>Fuel unit</th>
<th>equivalency factor (EV)</th>
<th>unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>hp &lt;= 600 or mmbtu&lt;= 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>1.0</td>
<td>unit less</td>
</tr>
<tr>
<td>hp&gt;600 or mmbtu &gt; 4.2</td>
<td>Diesel</td>
<td>gallon</td>
<td>0.06</td>
<td>unit less</td>
</tr>
<tr>
<td>RICE 2SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>15</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SLB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>15</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>RICE 4SRB</td>
<td>Natural gas or Propane</td>
<td>mmscf</td>
<td>15</td>
<td>gal/mmscf</td>
</tr>
<tr>
<td>Gasoline fired</td>
<td>Gasoline</td>
<td>gallon</td>
<td>0.29</td>
<td>unit less</td>
</tr>
</tbody>
</table>

Compliance with these limits, shall limit the PM, PM10, PM2.5, NOx, VOC and CO potential to emit increase to less than 25, 15, 10, 40, 40 and 100 tons per twelve (12) consecutive month period, respectively, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the Project 1 Modification approved through SSM 097-41322-00310.

Compliance with these limits, shall limit the SO2 potential to emit increase to less than 40 tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-3 (Emission Offset) not applicable to the SSM 097-41322-00310.

D.2.5 **VOC Emission Limitation [326 IAC 8-1-6]**

In order to render the requirements of 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) not applicable, the VOC emissions from 45, 48N, 48S, 50N, 52N, 50S, and 52S, each, shall not exceed 24.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit, shall limit the potential to emit of VOC to less than twenty-five (25) tons per twelve (12) consecutive month period from 45, 48N, 48S, 50N, 52N 50S and 52S shall render the requirements of 326 IAC 8-1-6 not applicable to 45, 48N, 48S, 50N, 52N 50S and 52S.

D.2.6 **Hazardous Air Pollutants [326 IAC 20] [326 IAC 2-4.1]**

In order to render the requirements of 326 IAC 2-4.1 and 326 IAC 20 not applicable, the total Gasoline usage at the test cells 45, 48N, 48S, 50N, 52N and 52S shall not exceed 497.8 kilo gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with this limit, combined with the HAPs PTE of all other emission units at this source shall limit the source wide single HAP and combined HAPs to less than 10 and 25 tons per twelve (12) consecutive month period, respectively, and make the source an area source under the HAPs and shall render the requirements of 40 CFR 63, Subpart DDDDD not applicable.

D.2.4D.2.7 **Preventive Maintenance Plan [326 IAC 2-7-5(12)]**

A Preventive Maintenance Plan is required for Emission Unit ETC these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.
Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.2.58 Sulfur Dioxide Emissions and Sulfur Content

Compliance for Test Cells 701, 704, 705, 706, 707, 709, 711, 32N and 38N specified in Condition D.2.2 shall be determined utilizing one of the following options:

D.2.69 Emission Factors and Performance Testing

(d) In order to determine compliance with Condition D.2.5, VOC emissions from test cells 45, 48N, 48S, 50N, 52N, 50S, and 52S shall be calculated using AP42 emission factors or EPA certified rates.

(b) To document the compliance status with Conditions D.2.3 and Condition D.2.69, the Permittee shall:

(1) Documentation whether the engine is EPA certified or noncertified.

(2) Documentation of EPA certified emission rates, if EPA certified emission rates are used in the diesel equivalent usage calculations.

(3) Actual emission factor (EFACTUAL) used in the diesel equivalent usage calculations.

(4) Actual fuel usage (FC) by amount and type.

(5) Calculated value of diesel equivalent usage (FCE(Pollutant))

(c) To document the compliance status with Condition D.2.4, the Permittee shall maintain monthly records shown below for the engines tested at the Test Cells 45, 48N, 48S, and 51N that qualifies under Condition D.2.4(b), (c), and (d) as being subject to the diesel equivalent usage limit (FCE(Pollutant)). Records shall be complete and sufficient to establish compliance with the Condition D.2.4.

(1) Documentation whether the engine is EPA certified or noncertified.

(2) Documentation of EPA certified emission rates, if EPA certified emission rates are used in the diesel equivalent usage calculations.

(3) Actual fuel usage (FC) by amount and type.

(4) Calculated value of diesel equivalent usage (FCE(Pollutant))

(5) In lieu of maintaining records for each engine, the source may elect to maintain records for each group of identical engines.

(6) The sum of the diesel equivalent usage (FCE(Pollutant)) or each month and each compliance period, each diesel equivalent usage (FCE(Pollutant)) specified in Condition D.2.4.
(d) To document the compliance status with Conditions D.2.4 and D.2.5, the Permittee shall maintain monthly records shown below for each engine tested at the Test Cells 45, 48N, 48S, 51N, 50N, 52N, 50S, and 52S. Records shall be complete and sufficient to establish compliance with the Conditions D.2.4 and D.2.5.

1. Engine rating at the Test Cells 45, 48N, 48S, 51N, 50N, 52N, 50S, and 52S.

2. Amount and type of each fuel used at Test Cells 45, 48N, 48S, 51N, 50N, 52N, 50S, and 52S.

3. Documentation whether the engine is EPA certified or noncertified at Test Cells 45, 48N, 48S, 51N, 50N, 52N, 50S, and 52S.

4. Documentation of EPA certified emission rates, if EPA certified emission rates are used in the equivalent diesel usage calculations and VOC emission calculations.

5. Equivalent diesel usage calculations for the Test Cells 45, 48N, 48S, and 51N.

6. VOC emission calculations for the Test Cells 45, 48N, 48S, 50N, 52N, 50S, and 52S.

(c) . . .

D.2.811 Reporting Requirements

(a) If the Permittee is a member of IDEM’s Environmental Stewardship Program (ESP) program, semi-annual summaries of the information to document the compliance status with Conditions D.2.3, D.2.4(a), D.2.4, D.2.5 and Condition D.2.6 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the semi-annual period being reported.

(b) If the Permittee is no longer a member of IDEM’s Environmental Stewardship Program (ESP) program, quarterly summaries of the information to document the compliance status with Conditions D.2.3, D.2.4(a), D.2.4, D.2.5 and Condition D.2.6 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the calendar quarter being reported.

(c) Section C - General Reporting contains the Permittee’s obligation with regard to the reporting required by this condition. The reports submitted by the Permittee do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35).

SECTION D.3

EMISSIONS UNIT OPERATION CONDITIONS

. . .

D.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for Test Cells TC-107, TC-109, TC-111, these facilities, and TC-112 their control devices. Section B - Preventive Maintenance Plan contains the Permittee’s obligation with regard to the preventive maintenance plan required by this condition.
D.3.5 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.2 and Condition D.3.4, the Permittee shall:

(1) Maintain monthly records of the diesel fuel throughput in Test Cells TC-107, TC-109, TC-111, and TC-112 for engines 600 horsepower or less and maintain monthly records of diesel fuel throughput in Test Cells TC-107, TC-109, TC-111, and TC-112 for engines greater than 600 horsepower.

(2) Maintain records of NOx emissions on a monthly basis using the emissions factors in Condition D.3.4 in conjunction with monthly diesel fuel throughput in Test Cells TC-107, TC-109, TC-111, TC-112 to calculate combined NOx emissions from Test Cells TC-107, TC-109, TC-111, and TC-112. Records necessary to demonstrate the compliance status shall be available not later than thirty (30) days of the end of each compliance period.

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

D.4.3 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1]

Pursuant to 326 IAC 7-1.1-1 (SO2 Emissions Limitations), Sulfur Dioxide (SO2) emissions from Test Cells O-2 and O-31, shall each not exceed five tenths (0.5) pounds per million Btu heat input.

D.4.34 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for Test Stands O-2, O-24, O-25 these facilities and O-34 their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.4.45 Emission Factors and Performance Testing

D.4.6 Sulfur Dioxide Emissions and Sulfur Content

Compliance for Transmission Test Stands specified in Condition D.4.3 shall be determined utilizing one of the following options:

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input by:

(1) Providing vendor analysis of fuel delivered, if accompanied by a certification; or

(2) Analyzing the fuel sample to determine the sulfur content of the fuel via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Fuel samples may be collected from the fuel tank immediately after the fuel tank is filled and before any fuel is combusted; and
(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.57 Record Keeping Requirements

(a) To document the compliance status with Condition D.4.2(b) and Condition D.4.45, for Test Stand O-2, maintain monthly records of the diesel fuel throughput for engines 600 horsepower or less and maintain monthly records of diesel fuel throughput for engines greater than 600 horsepower. Maintain records of the NOx emissions on a monthly basis using the emissions factors in Condition D.4.45 in conjunction with monthly diesel fuel throughput in Test Stands O-2 to calculate NOx emissions from Test Stand O-2. Records necessary to demonstrate compliance shall be available no later than thirty (30) days of the end of each compliance period.

(b) To document the compliance status with Condition D.4.2(d), for Test Stands O-24 and O-25, maintain monthly records of the diesel fuel throughput for engines 600 horsepower or less and maintain monthly records of diesel fuel throughput for engines greater than 600 horsepower. Maintain records of the combined NOx emissions on a monthly basis using the emissions factors in Condition D.4.4 in conjunction with combined monthly diesel fuel throughput in Test Stands O-24 and O-25 to calculate NOx emissions from Test Stand O-24 and O-25. Records necessary to demonstrate compliance shall be available no later than thirty (30) days of the end of each compliance period.

(c) To document the compliance status with Condition D.4.2(f), for Test Stand O-31, maintain monthly records of the diesel fuel throughput for engines 600 horsepower or less and maintain monthly records of diesel fuel throughput for engines greater than 600 horsepower. Maintain records of the NOx emissions on a monthly basis using the emissions factors in Condition D.4.4 in conjunction with monthly diesel fuel throughput in Test Stand O-31 to calculate emissions from Test Stand O-31. Records necessary to demonstrate compliance shall be available no later than thirty (30) days after the end of each compliance period.

(d) To document the compliance status with Condition D.4.3, the Permittee shall maintain records in accordance with (1) through (6) below. Records necessary to demonstrate compliance shall be available not later than thirty (30) days of the end of each compliance period.

(1) Calendar dates covered in the compliance determination period;

(2) Actual diesel fuel usage since last compliance determination period and equivalent sulfur dioxide emissions;

(3) A certification, signed by the owner or operator which is not necessarily the responsible official, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:
(4) Fuel supplier certifications.

(5) The name of the fuel supplier; and

(6) A statement from the fuel supplier that certifies the sulfur content of the diesel fuel.

Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required to be maintained by this condition.

D.4.6 Reporting Requirements

(a) If the Permittee is a member of IDEM's Environmental Stewardship Program (ESP) program, semi-annual summaries of the information to document the compliance status with Condition D.4.2 and Condition D.4.4 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the semi-annual period being reported.

(b) If the Permittee is no longer a member of IDEM's Environmental Stewardship Program (ESP) program, quarterly summaries of the information to document the compliance status with Condition D.4.2 and Condition D.4.4 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the calendar quarter being reported.

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

D.5.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS

D.6.3 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1]

Pursuant to 326 IAC 7-1.1-1 (SO2 Emissions Limitations), Sulfur Dioxide (SO2) emissions from Test Cell 702 shall each not exceed five tenths (0.5) pounds per million Btu heat input.

D.6.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.45 Emission Factors and Performance Testing
D.6.6 Sulfur Dioxide Emissions and Sulfur Content

Compliance for Test Cells specified in Condition D.6.3 shall be determined utilizing one of the following options:

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input by:

(1) Providing vendor analysis of fuel delivered, if accompanied by a certification; or

(2) Analyzing the fuel sample to determine the sulfur content of the fuel via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Fuel samples may be collected from the fuel tank immediately after the fuel tank is filled and before any fuel is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.6.57 Record Keeping Requirements

(a) To document the compliance status with Condition D.6.2 and Condition D.6.45, the Permittee shall:

(1) Maintain monthly records of the diesel fuel throughput in Test Cell 702 for engines 600 horsepower or less and maintain monthly records of diesel fuel throughput in Test Cell 702 for engines greater than 600 horsepower.

(2) Maintain records of NOx emissions on a monthly basis using the emissions factors in Condition D.6.45 in conjunction with monthly diesel fuel throughput in Test Cell 702 to calculate NOx emissions from Test Cell 702. Records necessary to demonstrate compliance shall be available no later than thirty (30) days of the end of each compliance period.

(b) To document the compliance status with Condition D.6.3, the Permittee shall maintain records in accordance with (1) through (6) below. Records necessary to demonstrate compliance shall be available not later than thirty (30) days of the end of each compliance period.

(1) Calendar dates covered in the compliance determination period;

(2) Actual diesel fuel usage since last compliance determination period and equivalent sulfur dioxide emissions;

(3) A certification, signed by the owner or operator which is not necessarily the responsible official, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and
If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(4) Fuel supplier certifications.

(5) The name of the fuel supplier; and

(6) A statement from the fuel supplier that certifies the sulfur content of the diesel fuel.

D.6.68 Reporting Requirements

(a) If the Permittee is a member of IDEM's Environmental Stewardship Program (ESP) program, a semi-annual summary of the information to document the compliance status with Conditions D.6.2 and D.6.45 shall be submitted using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days after the end of the semi-annual period being reported.

(b) If the Permittee is no longer a member of IDEM's Environmental Stewardship Program (ESP) program, a quarterly summary of the information to document the compliance status with Conditions D.6.2 and D.6.45 shall be submitted using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days after the end of the calendar quarter being reported.

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS

D.7.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for emission units BLR6, these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

SECTION D.8 EMISSIONS UNIT OPERATION CONDITIONS

(qq) Three (3) natural gas-fired VET facility furnaces, identified as RZ1, RZ2 and RZ3, respectively, approved in year for construction in 2020, each with a maximum capacity of maximum capacity 0.4 MMBtu/hr, and venting outside.

(The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.8.1 Particulate Matter Limitations Except Lake County [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate (PM) emissions from the natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, emergency diesel generators, emergency stationary
fire pumps, grinding and machining operations, shot blast, production welding, and draw/temper furnaces and VET facility furnaces, each shall not exceed three hundredths (0.03) grains per dry standard cubic foot of exhaust air.

D.8.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and any associated control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

SECTION D.9 EMISSIONS UNIT OPERATION CONDITIONS

D.9.5 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for ETC55. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

SECTION D.11 EMISSIONS UNIT OPERATION CONDITIONS

<table>
<thead>
<tr>
<th>Emission Unit Descriptions:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td>(o) Three (3) natural gas-fired Boilers, identified as BLR 7, BLR 8 and BLR 9, respectively, approved in 2020 for construction, each capable of combusting only natural gas, with a maximum capacity of 2.36, 2.36 and 1.5 MMbtu/hr, exhausting out to stacks R1, R2 and R3, respectively.</td>
</tr>
<tr>
<td>Under 40 CFR 60, Subpart Dc, these boilers are affected source.</td>
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</tbody>
</table>

Insignificant Activities

| (pp) Two (2) induced draft cooling tower, identified as VCT1 and VCT2, respectively, approved in 2020 for construction, each with a maximum water recirculation rate of 3000 gallons per minute with maximum total dissolved solid content of 24,000 parts per million in the water, without control and exhausting outside. |

(The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.11.1 Particulate [326 IAC 6.5-1-2]

(a) Pursuant to 326 IAC 6.5-1-2(b)(3), particulate emissions from the boilers BLR 1 and BLR 3, BLR 7, BLR 8 and BLR 9 shall not exceed 0.01 grains per dry standard cubic foot (dscf).

(b) Pursuant to 326 IAC 6.5-1-2(a), particulate emissions from the cooling towers (CT1, VCT1 and VCT2) shall not exceed 0.03 grains per dry standard cubic foot (dscf).
D.11.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.
SECTION D.12  EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description:

(p) One (1) shot blast unit, identified as SB1, constructed in 2019, with a maximum shot usage rate of 450 pounds per hour, using coal fired boiler slag as shot media, using dust collector filters DC1 as control, and exhausting inside.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.12.1 PSD Minor Limit [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable to the shot blast unit (SB1), the PM2.5 emissions from the shot blast unit (SB1) shall not exceed 2.26 pounds per hour.

Compliance with this limit will limit PM2.5 PTE of the shot blast unit (SB1) to less than 10 tons per twelve (12) consecutive month period and therefore, render the requirements of 326 IAC 2-2 (PSD) not applicable to the shot blast unit (SB1).

D.12.2 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a), particulate matter (PM) emissions from the shot blast unit (SB1) shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

D.12.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for this facility and any associated control device. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.12.4 Particulate Control

(a) In order to comply with Conditions D.12.1 and D.12.2, the dust collector filters (DC1) for particulate control shall be in operation and control emissions from the shot blast unit (SB1) at all times SB1 is in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.12.5 Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut
down no later than the completion of the processing of the material in the shot blast unit (SB1). Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

D.12.6 Parametric Monitoring

The Permittee shall record the pressure drop across the dust collector filters (DC1) used in conjunction with SB1, at least once per day when SB1 is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.12.7 Record Keeping Requirements

(a) To document the compliance status with Condition D.12.6, the Permittee shall maintain daily records of the pressure drop across the baghouse. The Permittee shall include in its daily record when the pressure drop across the baghouse is not taken and the reason for the pressure drop was not taken (e.g. the process did not operate that day).

(b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

SECTION E.1 NSPS

E.1.1 General Provision Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, except when otherwise specified in 40 CFR Part 60, Subpart Dc.

E.1.2 Standard of Performance for Small Industrial-Commercial Institutional Steam Generating Units NSPS [326 IAC 12] [40 CFR 60, Subpart Dc]

Pursuant to 40 CFR 60, Subpart Dc, The Permittee shall comply with the following provisions of Standard of Performance for Small Industrial-Commercial Institutional Steam Generating Units, 40 CFR 60, Subpart Dc (included as Attachment A to the operating permit), which are
incorporated by reference as 326 IAC 12, for the Steam Boilers, identified as BLR6, BLR 1 and BLR 3 emission unit(s) listed above:

SECTION E.2 NSPS

Emission Unit Descriptions:

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<tr>
<th>Test Cell ID</th>
<th>Construction Dates</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
<th>Stack ID</th>
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<td>diesel, natural gas, gasoline and propane</td>
<td>Reciprocating</td>
<td>4000</td>
<td>PTE 057</td>
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(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, for the emission unit(s) listed above, except when otherwise specified in 40 CFR Part 60, Subpart III.

E.2.2 Standard of Performance for Stationary Compression Ignition Internal Combustion Engines [326 IAC 12] [40 CFR 60, Subpart III]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart III (included as Attachment B to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above.
SECTION E.3  NESHAP

E.3.1 General Provision Relating National Emission Standards for Hazardous Air Pollutants
[326 IAC 20-1] [40 CFR 63, Subpart A]

(a) Pursuant to 40 CFR Part 63.1, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, for the gasoline fuel transfer and dispensing operations emission unit(s) listed above, except when otherwise specified in 40 CFR Part 63, Subpart CCCCCC.

SECTION E.4  NESHAP

E.4.1 General Provision Relating to National Emission Standards for Hazardous Air Pollutants
[326 IAC 20-1] [40 CFR 63, Subpart A]

(a) Pursuant to 40 CFR 63.1, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, for the plating operations emission unit(s) listed above, except when otherwise specified in 40 CFR Part 63, Subpart WDDDD.

E.4.2 National Emission Standards for Hazardous Air Pollutants for Plating and Polishing Operations
[40 CFR 63, Subpart WDDDD]

Pursuant to 40 CFR Part 63, Subpart WDDDD (included as Attachment D of this permit), The Permittee shall comply with the following provisions of National Emission Standards for Hazardous Air Pollutants for Plating and Polishing Operations, 40 CFR Part 63, Subpart WDDDD (included as Attachment D to the operating permit), for the plating operations emission unit(s) listed above:

SECTION E.5  NSPS

E.5.1 General Provisions Relating to New Source Performance Standards (NSPS)
[40 CFR 60, Subpart A] [326 IAC 12-1]

Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, for the Test Cell 701 and Test Cell 705 (of Emission Unit ETC) emission unit(s) listed above, except when otherwise specified in 40 CFR 60, Subpart KKKK.

E.5.2 Stationary Combustion Turbines NSPS Requirements [40 CFR 60, Subpart KKKK] [326 IAC 12]

Pursuant to 40 CFR 60, Subpart KKKK, The Permittee shall comply with the following provisions of 40 CFR 60, Subpart KKKK (included as Attachment E to the operating permit), which are incorporated by reference as 326 IAC 12 for Test Cell 701 and Test Cell 705 (of Emission Unit ETC) emission unit(s) listed above,:
### SECTION E.6 NESHAP

#### Emission Unit Descriptions:

(c) ...

<table>
<thead>
<tr>
<th>Test Cell ID</th>
<th>Construction Dates</th>
<th>Fuel Type</th>
<th>Engine Type</th>
<th>Estimated Maximum Engine Size in Horsepower</th>
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<td>45</td>
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E.6.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [326 IAC 20-1] [40 CFR 63, Subpart A]

(a) Pursuant to 40 CFR 63.1, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR 63, Subpart ZZZZ.

E.6.2 Stationary Reciprocating Internal Combustion Engines NESHAP [326 IAC 20-82] [40 CFR 63, Subpart ZZZZ]

Pursuant to 40 CFR 63, Subpart ZZZZ, The Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ (included as Attachment F to the operating permit), which are incorporated by reference as 326 IAC 20-82, as follows: for the emission unit(s) listed above:

...  

### SECTION E.7 NSPS

#### Emission Unit Descriptions:

(c) Emission Unit ETC consists of the following development transmission test cells:
### Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

[326 IAC 12] [40 CFR 60, Subpart JJJJ]

Pursuant to 40 CFR 60, Subpart JJJJ, the Permittee shall comply with the provisions of Standard of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart JJJJ (included as Attachment G to the operating permit), which are incorporated by reference in 326 IAC 12, for 50N, 52N, 50S, 52S, and ETC53 the emissions unit(s) listed above:

### E.7.2 Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

#### INDUSTRY DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 ESP Semi-Annual Report

Source Name: Allison Transmission, Inc. - Speedway Main Campus  
Source Address: One Allison Way, Indianapolis, Indiana  
Part 70 Permit No.: T097-41349-00310  
Facility (Condition): Test Cells 45, 48N, 48S, and 51 (Condition D.2.4(a))  
Parameter: equivalent diesel usage  
Limits:

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Quarter: ___________________ Year: ________________

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</table>

- □ No deviation occurred in this semi-annual period.
- □ Deviation/s occurred in this semi-annual period.
  Deviation has been reported on: __________________________

Submitted by: ____________________________________________

Title / Position: _________________________________________

Signature: ______________________________________________

Date: ___________________________________________________

Phone: __________________________________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  

Part 70 ESP Semi-Annual Report

Source Name: Allison Transmission, Inc. - Speedway Main Campus  
Source Address: One Allison Way, Indianapolis, Indiana  
Part 70 Permit No.: T097-41349-00310  
Facility (Condition): Test Cells 45, 48N, 48S, and 51 (Condition D.2.4(a))  
Parameter: equivalent diesel usage  

Limits:

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Quarter:_____________________   Year:__________________

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☐ No deviation occurred in this semi-annual period.  

☐ Deviation/s occurred in this semi-annual period.  
Deviation has been reported on:___________________________

Submitted by: ________________________________________________
Title / Position: ________________________________________________
Signature: _____________________________________________________
Date: _________________________________________________________
Phone: _________________________________________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  

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Source Name: Allison Transmission, Inc. - Speedway Main Campus  
Source Address: One Allison Way, Indianapolis, Indiana  
Part 70 Permit No.: T097-41349-00310  
Facility (Condition): Test Cells 45, 48N, 48S, 50N, 52N, 50S and 52S (Condition D.2.6)  
Parameter: total Gasoline usage  
Limit: 497.8 kilo gallons per twelve (12) consecutive month period with compliance determined at the end of each month.  

Quarter: _________________ Year: ________________  

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>total Gasoline usage This Month (gallon)</td>
<td>total Gasoline usage Previous 11 Months (gallon)</td>
<td>total Gasoline usage 12 Month Total (gallon)</td>
</tr>
<tr>
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<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

☐ No deviation occurred in this semi-annual period.  
☐ Deviation/s occurred in this semi-annual period.  
   Deviation has been reported on: ________________________________  

Submitted by: ____________________________________________  
Title / Position: ____________________________________________  
Signature: _________________________________________________  
Date: _____________________________________________________  
Phone: ____________________________________________________
### Part 70 ESP Semi-Annual Report

Source Name: Allison Transmission, Inc. - Speedway Main Campus  
Source Address: One Allison Way, Indianapolis, Indiana  
Part 70 Permit No.: T097-41349-00310  
Facility (Condition): Test Cells 45, 48N, 48S (Condition D.2.5)  
Parameter: VOC emissions  
Limits: 24.9 tons per twelve (12) consecutive month period with compliance determined at the end of each month for each test cell

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Year</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>Test Cell</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>VOC Emissions This Month (tons)</td>
<td>VOC Emissions Previous 11 Months (tons)</td>
<td>VOC Emissions 12 Month Total (tons)</td>
</tr>
<tr>
<td>45</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>48N</td>
<td></td>
<td></td>
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<tr>
<td>48S</td>
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<td></td>
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<tr>
<td>45</td>
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<tr>
<td>48N</td>
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</tr>
<tr>
<td>48N</td>
<td></td>
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</tr>
<tr>
<td>48S</td>
<td></td>
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</tbody>
</table>

- No deviation occurred in this semi-annual period.  
- Deviation/s occurred in this semi-annual period.  
  Deviation has been reported on: ____________________________

Submitted by: ________________________________  
Title / Position: ________________________________  
Signature: ________________________________  
Date: ________________________________  
Phone: ________________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 ESP Semi-Annual Report

Source Name: Allison Transmission, Inc. - Speedway Main Campus
Source Address: One Allison Way, Indianapolis, Indiana
Part 70 Permit No.: T097-41349-00310
Facility (Condition): Test Cells 50N, 52N, 50S, 52S (Condition D.2.5)
Parameter: VOC emissions
Limits: 24.9 tons per twelve (12) consecutive month period with compliance determined at the end of each month for each test cell

Quarter: ________________ Year: ________________

<table>
<thead>
<tr>
<th>Month</th>
<th>Test Cell</th>
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<th>Column 2</th>
<th>Column 1 + Column 2</th>
</tr>
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<tbody>
<tr>
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<td>VOC Emissions This Month (tons)</td>
<td>VOC Emissions Previous 11 Months (tons)</td>
<td>VOC Emissions 12 Month Total (tons)</td>
</tr>
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<td>50N</td>
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</tr>
<tr>
<td>52S</td>
<td></td>
<td></td>
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</tbody>
</table>

☐ No deviation occurred in this semi-annual period.

☐ Deviation/s occurred in this semi-annual period.
   Deviation has been reported on: ____________________________

Submitted by: ____________________________________________

Title / Position: __________________________________________

Signature: _______________________________________________

Date: ____________________________________________________

Phone: __________________________________________________

TSD for Part 70 Renewal T097-41349-00310
SSM 097-41322-00310
Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on April 10, 2019. Additional information was received on May 28, 2019.

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 097-41322-00310. The operation of this stationary transmission manufacturing plant shall be subject to the conditions of the attached proposed Part 70 Operating Permit Renewal No. T097-41349-00310.

The staff recommends to the Commissioner that the Part 70 Operating Permit Renewal and Significant Source Modification be approved.

IDEM Contact

(a) If you have any questions regarding this permit, please contact Mehul Sura, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 233-6868 or toll free at 1-800-451-6027, and ask for Mehul Sura or (317) 233-6868.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: http://www.in.gov/idem/airquality/2356.htm; and the Citizens’ Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.
**Modification Summary (tons/year)**

<table>
<thead>
<tr>
<th>New Emission Unit</th>
<th>Existing Emission Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New Emission Unit</strong></td>
<td><strong>Existing Emission Unit</strong></td>
</tr>
<tr>
<td>Diesel, Natural Gas, Gasoline and Propane</td>
<td>Natural Gas and Gasoline</td>
</tr>
<tr>
<td>11.56</td>
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<td>6.63</td>
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<td>58.39</td>
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<td>61.47</td>
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<td>4.64</td>
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<tr>
<td>15.33</td>
<td>0.00</td>
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<table>
<thead>
<tr>
<th><strong>Existing Emission Unit</strong></th>
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<td>Diesel, Natural Gas, Gasoline and Propane</td>
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<td>0.85</td>
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<td>0.00003</td>
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</table>

<table>
<thead>
<tr>
<th><strong>New Emission Unit</strong></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Diesel, Natural Gas, Gasoline and Propane</td>
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<tr>
<td>0.64</td>
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<tr>
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<tr>
<td>0.54</td>
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<tr>
<td>0.00002</td>
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</table>

<table>
<thead>
<tr>
<th><strong>New Emission Unit</strong></th>
<th><strong>Existing Emission Unit</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel, Natural Gas, Gasoline and Propane</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>New Emission Unit</strong></th>
<th><strong>Existing Emission Unit</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel, Natural Gas, Gasoline and Propane</td>
<td>Natural Gas</td>
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<tr>
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<td>0.00</td>
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<td>0.00</td>
</tr>
<tr>
<td>0.00002</td>
<td>0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>New Emission Unit</strong></th>
<th><strong>Existing Emission Unit</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel, Natural Gas, Gasoline and Propane</td>
<td>Natural Gas</td>
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<tr>
<td>19.71</td>
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<tr>
<td>-</td>
<td>-</td>
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<tr>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Total PTE Increase Due to New Emission Units (tons/year)**

<table>
<thead>
<tr>
<th>Fuel</th>
<th>PM</th>
<th>PM-10</th>
<th>PM-2.5</th>
<th>SOx</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP</th>
<th>Total HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel, Natural Gas, Gasoline and Propane</td>
<td>32.12</td>
<td>20.90</td>
<td>20.47</td>
<td>58.41</td>
<td>373.21</td>
<td>100.96</td>
<td>4.64</td>
<td>15.39</td>
<td></td>
</tr>
</tbody>
</table>

**Total PTE Increase Due to Modification (tons/year)**

<table>
<thead>
<tr>
<th>Fuel</th>
<th>PM</th>
<th>PM-10</th>
<th>PM-2.5</th>
<th>SOx</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP</th>
<th>Total HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel, Natural Gas, Gasoline and Propane</td>
<td>47.32</td>
<td>32.85</td>
<td>32.29</td>
<td>97.56</td>
<td>669.37</td>
<td>295.47</td>
<td>209.87</td>
<td>21.80</td>
<td>72.11</td>
</tr>
</tbody>
</table>
Emissions (tons/year) = engine rating (kW) x (emission factor (g/kW.hr)/453.5 grams/lb) x [8760 (hrs/yr) / 2000 (lbs/ton)]

Emissions (tons/year) = engine rating (hp) x emission factor (lb/hp-hr) x [8760 (hrs/yr) / 2000 (lbs/ton)]
<table>
<thead>
<tr>
<th>Substance</th>
<th>Units</th>
<th>Tons/Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td></td>
<td>0.00392886</td>
</tr>
<tr>
<td>Acrolein</td>
<td></td>
<td>0.005805778</td>
</tr>
<tr>
<td>Cadmium</td>
<td></td>
<td>0.014201712</td>
</tr>
<tr>
<td>Total PAH***</td>
<td></td>
<td>0.0092716</td>
</tr>
<tr>
<td>Hexane</td>
<td></td>
<td>0.071258746</td>
</tr>
</tbody>
</table>

**Formulas**

Emissions (tons/year) = engine rating (MMBtu/hr) x emission factor (lb/MMBtu) x \[\frac{8760 \text{(hrs/yr)}}{2000 \text{(lbs/ton)}}\]
HAPs Potential to Emit

The source-wide uncontrolled single HAP and combined HAPs emission are more than 10 and 25 tons/year, respectively, due to gasoline fuel engines but the source-wide uncontrolled single HAP and combined HAPs emission are less than 10 and 25 tons/year, respectively, due to all other fuel engines.

Therefore, a gasoline usage limit has been established to limit the single HAP and combined HAPs emission to less than 10 and 25 tons/year, respectively, through gasoline fuel usage limit.

Only test cells 45, 48N, 48S, 50N, 52N, 50S and 52S use gasoline fuel.

### Gasoline Usage limit

<table>
<thead>
<tr>
<th>Total HAPs</th>
<th>Benzene</th>
<th>Toluene</th>
<th>Xylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAPs source-wide PTE (tons/year)</td>
<td>24.9</td>
<td>9.9</td>
<td>9.9</td>
</tr>
<tr>
<td>HAPs emission from all non-engine units (tons/year)</td>
<td>1.61</td>
<td>0.04</td>
<td>0.14</td>
</tr>
<tr>
<td>HAPs PTE from all engines (tons/year)</td>
<td>23.29</td>
<td>9.86</td>
<td>9.76</td>
</tr>
<tr>
<td>Gasoline Engine HAPs Emission Factor (lb/MMBtu)</td>
<td>0.7855680</td>
<td>0.0009031</td>
<td>0.000409</td>
</tr>
<tr>
<td>Gasoline Heating Value (Btu/lb)</td>
<td>20300</td>
<td>20300</td>
<td>20300</td>
</tr>
<tr>
<td>Gasoline Emission Factor (lb of pollutant/lb of gasoline)</td>
<td>0.015337884</td>
<td>1.89399E-05</td>
<td>8.3027E-06</td>
</tr>
<tr>
<td>Gasoline Emission Factor (lb of pollutant/gal gasoline)</td>
<td>0.009361994</td>
<td>0.000115533</td>
<td>5.86455E-06</td>
</tr>
<tr>
<td>Gasoline Usage limit (gallons/yr)</td>
<td>497,817.0</td>
<td>170,739.464.3</td>
<td>385,394.347.2</td>
</tr>
<tr>
<td>Gasoline Usage limit (kgal/yr)</td>
<td>497.8</td>
<td>170,739.5</td>
<td>385,394.3</td>
</tr>
</tbody>
</table>

Formula:

- \( \text{Gasoline Usage limit (gallons/yr)} = \frac{(\text{HAPs PTE from all engines (tons/year)} \times 2000)}{\text{Gasoline Emission Factor (lb of pollutant/gal gasoline) \times \text{Gasoline density (lb/gallon)}}} \)
- \( \text{Gasoline Usage limit (kgal/yr)} = \frac{\text{Gasoline Usage limit (gallons/yr)}}{1000} \)
<table>
<thead>
<tr>
<th>Cells</th>
<th>ENP</th>
<th>MMBtu/hr</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genset 1a</td>
<td>600</td>
<td>0.121668569</td>
<td>3.675</td>
<td>0.121668569</td>
<td>3.675</td>
<td>0.121668569</td>
</tr>
<tr>
<td>Genset 1b</td>
<td>600</td>
<td>0.121668569</td>
<td>3.675</td>
<td>0.121668569</td>
<td>3.675</td>
<td>0.121668569</td>
</tr>
<tr>
<td>Diesel Engine (&gt;600 HP)</td>
<td>600</td>
<td>0.121668569</td>
<td>3.675</td>
<td>0.121668569</td>
<td>3.675</td>
<td>0.121668569</td>
</tr>
<tr>
<td>Diesel Engine (&lt;=600 HP)</td>
<td>600</td>
<td>0.121668569</td>
<td>3.675</td>
<td>0.121668569</td>
<td>3.675</td>
<td>0.121668569</td>
</tr>
<tr>
<td>Diesel Engine (&gt;600 HP)</td>
<td>600</td>
<td>0.121668569</td>
<td>3.675</td>
<td>0.121668569</td>
<td>3.675</td>
<td>0.121668569</td>
</tr>
<tr>
<td>Diesel Engine (&lt;=600 HP)</td>
<td>600</td>
<td>0.121668569</td>
<td>3.675</td>
<td>0.121668569</td>
<td>3.675</td>
<td>0.121668569</td>
</tr>
</tbody>
</table>

CO2e calculations

\[
\text{CO2e (tons/yr)} = \text{CO2 Potential Emission (ton/yr)} \times \text{CO2 GWP (1)} + \text{CH4 Potential Emission (ton/yr)} \times \text{CH4 GWP (25)} + \text{N2O Potential Emission (ton/yr)} \times \text{N2O GWP (298)}.
\]

Potential Emission (tons/yr) = \([\text{Potential Throughput (MMBtu/yr)}] \times \text{Emission Factor (lb/MMBtu)} / 2,000 \text{ lb/ton}\)
# External Combustion - Natural Gas

---

<table>
<thead>
<tr>
<th>Heat Input Capacity</th>
<th>Potential Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mmBtu/hr</td>
</tr>
<tr>
<td>BLR 1</td>
<td>97.9</td>
</tr>
<tr>
<td>BLR 2</td>
<td>72.0</td>
</tr>
<tr>
<td>BLR 3</td>
<td>98.0</td>
</tr>
<tr>
<td>BLR 4</td>
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<td>BLR 5</td>
<td>2.4</td>
</tr>
<tr>
<td>BLR 6</td>
<td>2.4</td>
</tr>
<tr>
<td>BLR 7</td>
<td>1.5</td>
</tr>
<tr>
<td>Draw/Temper Furnaces</td>
<td>9.7</td>
</tr>
<tr>
<td>Heat Treat Furnaces</td>
<td>58.8</td>
</tr>
<tr>
<td>VET Furnaces RZ1, RZ2 and RZ3</td>
<td>1.2</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM*</th>
<th>PM10*</th>
<th>direct PM2.5*</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
<th>Toluene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>1.9</td>
<td>7.6</td>
<td>3.6</td>
<td>1.9</td>
<td>0.25</td>
<td>42.02</td>
<td>2.31</td>
<td>35.30</td>
<td>0.79</td>
</tr>
<tr>
<td><strong>see below</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Methodology**

All emission factors are based on normal firing.

- MMBtu = 1,000,000 Btu
- MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
### Soil Vapor Extraction (SVE) and Dense Non-Aqueous Phase Liquid (DNAPL) / Groundwater Recovery System

#### Potential to Emit (PTE) of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP)

Emission Unit ID ENCORE

<table>
<thead>
<tr>
<th>Process/Emission Unit</th>
<th>VOC (tons/year)</th>
<th>Total HAPs (tons/year)</th>
<th>Highest Single HAP (tons/year)</th>
<th>PTE (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVE (Plant 12 and Plant 14)</td>
<td>0.04</td>
<td>0.52</td>
<td>0.48</td>
<td>0.05</td>
</tr>
<tr>
<td>DNAPL/Groundwater Total (Plant 12)</td>
<td>7.34E-03</td>
<td>0.08</td>
<td>0.07</td>
<td>0.60</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>0.05</strong></td>
<td><strong>0.60</strong></td>
<td><strong>0.55</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Methodology

*Pollutant mass removal information from monitoring data provided by source.

**Percyloroethylene (PCE) and 1,1,1-Trichloroethane (1,1,1-TCA) have been exempted from the definition of volatile organic compounds (VOC) under 40 CFR 51.100, since they have been determined to have negligible photochemical reactivity.

2-year Adjusted Emissions = Actual Emissions / 2-year Adjustment Factor

2-year Adjustment Factor = (8760 hours/year) * (2 years/two-year period) / Actual Total Operating Time (hours/two-year period)

### Plant 12 SVE System*

#### PTE of Total HAP (tons/year)

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Actual Operating Time (hrs)</th>
<th>Actual Emissions (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd Quarter 2013 (7/1-9/30)</td>
<td>2171</td>
<td>87.96</td>
</tr>
<tr>
<td>4th Quarter 2013 (10/1-12/31)</td>
<td>2208</td>
<td>198.59</td>
</tr>
<tr>
<td>1st Quarter 2014 (1/1-3/31)</td>
<td>766.5</td>
<td>153.92</td>
</tr>
<tr>
<td>2nd Quarter 2014 (4/1-6/30)</td>
<td>1507</td>
<td>80.84</td>
</tr>
<tr>
<td>3rd Quarter 2014 (7/1-9/30)</td>
<td>1594</td>
<td>107.93</td>
</tr>
<tr>
<td>4th Quarter 2014 (10/1-12/31)</td>
<td>2194.5</td>
<td>148.05</td>
</tr>
<tr>
<td>1st Quarter 2015 (1/1-3/31)</td>
<td>1986</td>
<td>100.84</td>
</tr>
<tr>
<td>2nd Quarter 2015 (4/1-6/30)</td>
<td>2355</td>
<td>111.16</td>
</tr>
</tbody>
</table>

**Totals** 15204.00

2-year Adjusted Emissions = 1146.01 / 1.15 = 998.31

PTE of VOC (tons/year) = 0.29

PTE of Total HAP (tons/year) = 0.29

### Plant 14 SVE System*

#### PTE of Total HAP (tons/year)

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Actual Operating Time (hrs)</th>
<th>Actual Emissions (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd Quarter 2013 (7/1-9/30)</td>
<td>1485</td>
<td>156.68</td>
</tr>
<tr>
<td>4th Quarter 2013 (10/1-12/31)</td>
<td>2210.5</td>
<td>161.62</td>
</tr>
<tr>
<td>1st Quarter 2014 (1/1-3/31)</td>
<td>1564.5</td>
<td>108.94</td>
</tr>
<tr>
<td>2nd Quarter 2014 (4/1-6/30)</td>
<td>2052</td>
<td>78.66</td>
</tr>
<tr>
<td>3rd Quarter 2014 (7/1-9/30)</td>
<td>2294</td>
<td>48.34</td>
</tr>
<tr>
<td>4th Quarter 2014 (10/1-12/31)</td>
<td>2194</td>
<td>48.76</td>
</tr>
<tr>
<td>1st Quarter 2015 (1/1-3/31)</td>
<td>1053.65</td>
<td>16.16</td>
</tr>
<tr>
<td>2nd Quarter 2015 (4/1-6/30)</td>
<td>2063.5</td>
<td>23.81</td>
</tr>
</tbody>
</table>

**Totals** 14917.15

2-year Adjusted Emissions = 778.91 / 1.17 = 663.19

PTE of VOC (tons/year) = 3.41E-02

PTE of Total HAP (tons/year) = 0.23

### Plant 12 Dense Non-Aqueous Phase Liquid (DNAPL) / Groundwater Recovery System (Air Stripper)*

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Actual Operating Time (hrs)</th>
<th>Actual Emissions (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd Quarter 2013 (7/1-9/30)</td>
<td>1989</td>
<td>5.73</td>
</tr>
<tr>
<td>4th Quarter 2013 (10/1-12/31)</td>
<td>2131</td>
<td>75.90</td>
</tr>
<tr>
<td>1st Quarter 2014 (1/1-3/31)</td>
<td>2056</td>
<td>53.31</td>
</tr>
<tr>
<td>2nd Quarter 2014 (4/1-6/30)</td>
<td>2079.1</td>
<td>20.05</td>
</tr>
<tr>
<td>3rd Quarter 2014 (7/1-9/30)</td>
<td>1766.7</td>
<td>44.80</td>
</tr>
<tr>
<td>4th Quarter 2014 (10/1-12/31)</td>
<td>1396.2</td>
<td>47.31</td>
</tr>
<tr>
<td>1st Quarter 2015 (1/1-3/31)</td>
<td>2171</td>
<td>4.28</td>
</tr>
<tr>
<td>2nd Quarter 2015 (4/1-6/30)</td>
<td>2023</td>
<td>2.29</td>
</tr>
</tbody>
</table>

**Totals** 15612.00

2-year Adjusted Emissions = 283.06 / 1.12 = 252.77

PTE of VOC (tons/year) = 7.94E-03

PTE of Total HAP (tons/year) = 7.89E-02

---

*Perchloroethylene (PCE) and 1,1,1-Trichloroethane (1,1,1-TCA) have been exempted from the definition of volatile organic compounds (VOC) under 40 CFR 51.100, since they have been determined to have negligible photochemical reactivity.

2-year Adjusted Emissions = Actual Emissions / 2-year Adjustment Factor

2-year Adjustment Factor = (8760 hours/year) * (2 years/two-year period) / Actual Total Operating Time (hours/two-year period)
## CO Process Emissions from Heat Treat Furnaces

<table>
<thead>
<tr>
<th>Location</th>
<th>Maximum Methanol (CH₃OH) Usage (gal/day)</th>
<th>Density (lbs/gal)</th>
<th>Maximum Methanol (CH₃OH) Usage (lbs/day)</th>
<th>Emission Factor (lb CO/lb CH₃OH)</th>
<th>Fire Protection Burnoff Efficiency (%)</th>
<th>CO Emissions to Atmosphere (lbs/hr)</th>
<th>CO Emissions to Atmosphere (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Each</td>
<td>50</td>
<td>6.59</td>
<td>395</td>
<td>16.5</td>
<td>0.87422</td>
<td>98.5%</td>
<td>0.95</td>
</tr>
<tr>
<td>Total</td>
<td>1500</td>
<td>6.59</td>
<td>9885</td>
<td>411.9</td>
<td>0.87422</td>
<td>98.5%</td>
<td>5.401</td>
</tr>
</tbody>
</table>

**Methodology:**

Chemical Reaction: \( N_2 + CH_3OH + 2CH_4 + O_2 \rightarrow N_2 + CO + CO_2 + CH_4 + 4H_2 \)

For every one pound of CH₃OH that is used, 0.87422 pounds of CO is created, as follows:

\[
1 \text{ lb CH}_3\text{OH} \times \left[ \frac{\text{lb-mole CH}_3\text{OH}}{32.04 \text{ lb CH}_3\text{OH}} \right] \times \left[ \frac{1 \text{ lb-mole CO}}{1 \text{ lb-mole CH}_3\text{OH}} \right] \times \left[ \frac{28.01 \text{ lb CO}}{1 \text{ lb-mole CO}} \right] = 0.87422 \text{ lb CO/lb CH}_3\text{OH}
\]

CO Emissions to Atmosphere (ton/yr) = Max. CH₃OH Usage (gal/day) * Density (lbs/gal) * 1 day/24 hr * Emission Factor (lb CO/lb CH₃OH) * (1-Fire Protection Burnoff Efficiency) * 1 ton/2000 lbs
Gasoline Fuel Transfer and Dispensing Operation

Volatile Organic Compounds and Hazardous Air Pollutants (HAPs)

To calculate evaporative emissions from the gasoline dispensing fuel transfer and dispensing operation emission factors from AP-42 Chapter 5.2 Transportation And Marketing Of Petroleum Liquids were used. The total potential emission of VOC is as follows:

Gasoline Throughput = 932.0 gallons/day
Gasoline Throughput = 340.18 kgal/yr.

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Emission Factor (lb./kgal of throughput)*</th>
<th>PTE of VOC (tons/yr.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filling storage tank (submerged filling)</td>
<td>7.30</td>
<td>1.24</td>
</tr>
<tr>
<td>Tank breathing and emptying</td>
<td>1.00</td>
<td>0.17</td>
</tr>
<tr>
<td>Vehicle refueling (displaced losses - controlled)*</td>
<td>1.10</td>
<td>0.19</td>
</tr>
<tr>
<td>Spillage</td>
<td>0.70</td>
<td>0.12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1.72</strong></td>
<td></td>
</tr>
</tbody>
</table>

*There are no dispensing stations on this tank. The gasoline travels to the test cell engines through underground pipes.

The total potential emission of HAPs is as follows:

<table>
<thead>
<tr>
<th>Volatile Organic HAP</th>
<th>CAS#</th>
<th>HAP Content for Gasoline (% by weight)**</th>
<th>PTE of HAP (tons/yr.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-Butadiene</td>
<td>106-99-0</td>
<td>3.70E-5%</td>
<td>6.4E-05</td>
</tr>
<tr>
<td>2,2,4-Trimethylpentane</td>
<td>540-84-1</td>
<td>2.40%</td>
<td>0.04</td>
</tr>
<tr>
<td>Benzene</td>
<td>71-43-2</td>
<td>1.90%</td>
<td>0.03</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>1.70%</td>
<td>0.03</td>
</tr>
<tr>
<td>Methyl-test-butylether</td>
<td>1634-04-4</td>
<td>0.33%</td>
<td>5.7E-03</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>0.25%</td>
<td>4.3E-03</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>110-54-3</td>
<td>2.40%</td>
<td>0.04</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>8.10%</td>
<td>0.14</td>
</tr>
<tr>
<td>Total Xylenes</td>
<td>1330-20-7</td>
<td>9.00%</td>
<td>0.15</td>
</tr>
<tr>
<td><strong>Total PTE of HAPs (tons/yr.)</strong></td>
<td><strong>0.45</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PTE of Worst Single HAP (tons/yr.)</strong></td>
<td><strong>0.15</strong> (xylenes)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Methodology

*Emission Factors from AP-42 Chapter 5.2 Transportation And Marketing Of Petroleum Liquids (dated 6/08), Table 5.2-7


The gasoline throughput was provided by the source.

Gasoline Throughput (kgal/yr.) = [Gasoline Throughput (gallons/day)] * [365 days/yr.] * [kgal/1000 gal]
PTE of VOC (tons/yr.) = [Gasoline Throughput (kgal/yr.)] * [Emission Factor (lb./kgal)] * [ton/2000 lb.]
PTE of HAP (tons/yr.) = [HAP Content of Gasoline (% by weight)] * [PTE of VOC (tons/yr.)]

Abbreviations

VOC = Volatile Organic Compounds
HAP = Hazardous Air Pollutant
PTE = Potential to Emit
VOC and Particulate
From Surface Coating Operations
Paint 98 Paint Booth

max coating usage (gallons/yr)** 720.00

<table>
<thead>
<tr>
<th>Material</th>
<th>Density (Lb/Gal)</th>
<th>Pounds VOC per gallon of coating**</th>
<th>Weight % VOC</th>
<th>Weight % Water</th>
<th>Weight % VOC</th>
<th>Weight % Solids</th>
<th>Gal of Mat. (gal/hr)</th>
<th>Potential VOC (lbs/hour)</th>
<th>Potential VOC (lbs/day)</th>
<th>Potential VOC (tons/year)</th>
<th>Potential Particulate (tons/year)</th>
<th>Transfer Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>8.47</td>
<td>3.07</td>
<td>38.25%</td>
<td>25.91%</td>
<td>0.08219</td>
<td>0.25</td>
<td>6.06</td>
<td>1.11</td>
<td>0.40</td>
<td>50%</td>
<td>Particulate Control Efficiency (%)</td>
<td>0.95</td>
</tr>
</tbody>
</table>

**VOC content of coatings as indicated on the Material Safety Data Sheet (MSDS)
**Usage is based on actual coatings applied as recorded by ATI painters.

Pounds of VOC per gallon of coating less water (obtained directly from MSDS) OR = (Density (lb/gal) * (Weight % VOC)/(1-Weight % Water)
Potential VOC (lbs/hour) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/hr)
Potential VOC (lbs/day) = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/hr) * 24 hr/day
Potential Particulate (tons/year) = (units/hour) * (gal/unit) * (weight % solids) * (1-Transfer efficiency) * 8760 hrs/yr * (1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * weight % organics) / (Volume % solids)
Total = Worst Coating (yellow or black)
Controlled Potential Particulate (tons/year) = Potential Particulate (tons/year) * (1 - particulate control efficiency)

METHODOLOGY

Individual HAPs

<table>
<thead>
<tr>
<th>Material</th>
<th>Density (Lb/Gal)</th>
<th>Gallons (gal/hr)</th>
<th>Transfer Efficiency</th>
<th>Weight % Cobalt Compounds (ton/yr)</th>
<th>Controlled Cobalt Compounds (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>8.47</td>
<td>0.08219</td>
<td>50.00%</td>
<td>0.10%</td>
<td>1.52E-03</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.62E-05</td>
</tr>
</tbody>
</table>

Total HAPs = 1.52E-03

METHODOLOGY

Uncontrolled HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/hour) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs * (1- transf eff) (if applicable)
Controlled HAPs emission rate (tons/yr) = uncontrolled (tons/yr) * (1-control efficiency 95%)

Glycol Ethers used are Butyl Cellosolve which is Ethylene Glycol Monobutyl Ether which was delisted by USEPA on 11/29/04 is not shown.

Cooling Towers

<table>
<thead>
<tr>
<th>Cooling Tower</th>
<th>Total Dissolved Solids (ppm)</th>
<th>Drift Loss (%)</th>
<th>Drift Mass Emission Rate (lb/hr)</th>
<th>Total PM Emission Rate (lb/hr)</th>
<th>Total PM10 Emission Rate (lb/hr)</th>
<th>Total PM2.5 Emission Rate (lb/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT1</td>
<td>24,000</td>
<td>0.0100%</td>
<td>150.12</td>
<td>3.60</td>
<td>1.08</td>
<td>0.05</td>
</tr>
<tr>
<td>VCT1</td>
<td>24,000</td>
<td>0.0005%</td>
<td>7.51</td>
<td>0.18</td>
<td>0.79</td>
<td>0.05</td>
</tr>
<tr>
<td>VCT2</td>
<td>24,000</td>
<td>0.0005%</td>
<td>7.51</td>
<td>0.18</td>
<td>0.79</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Drift mass Emission Rate (lb/hr) = Circulation rate (GPM) x 8.34 (water density lbs/Gal) x 60 min/hr x 0.001%
PM Emission Rate (lbs/hr) = Drift Mass Rate x TDS (PPM) / 10^3
tons/year = lb/hr x 8760 (hrs/yr) / 2000 (lbs/ton)
PM10 fraction of PM = 29.9712%
PM2.5 Fraction of PM = 0.1767%
Table 1 - Emission Factors for Abrasives

<table>
<thead>
<tr>
<th>Abrasive</th>
<th>lb PM / lb abrasive</th>
<th>lb PM10 / lb PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand</td>
<td>0.041</td>
<td>0.70</td>
</tr>
<tr>
<td>Grit</td>
<td>0.010</td>
<td>0.70</td>
</tr>
<tr>
<td>Steel Shot</td>
<td>0.004</td>
<td>0.86</td>
</tr>
<tr>
<td>Other</td>
<td>0.010</td>
<td></td>
</tr>
</tbody>
</table>

**Potential to Emit Before Control**

<table>
<thead>
<tr>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.50 lb/hr (per nozzle)</td>
<td>3.15 lb/day</td>
<td>3.15 ton/yr</td>
</tr>
</tbody>
</table>

**Potential to Emit After Control**

<table>
<thead>
<tr>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.05 lb/hr</td>
<td>0.03 lb/day</td>
<td>0.03 ton/yr</td>
</tr>
</tbody>
</table>

**METHODOLOGY**

PM2.5 emissions assumed equal to PM10 emissions.


Potential to Emit (before control) = $EF \times FR \times (1 - w/200) \times N$

where $w$ should be entered in as a whole number (if $w$ is 50%, enter 50)

Potential to Emit (after control) = $[\text{Potential to Emit (before control)}] \times [1 - \text{control efficiency}]$

Potential to Emit (tons/year) = $[\text{Potential to Emit (lbs/hour)}] \times [8760 \text{ hours/year}] \times [\text{ton/2000 lbs}]$
## ATPA Summary

### Process/Emissions Unit

<table>
<thead>
<tr>
<th>Formula</th>
<th>PM</th>
<th>PM&lt;sub&gt;10&lt;/sub&gt;</th>
<th>PM&lt;sub&gt;2.5&lt;/sub&gt;</th>
<th>SO₂</th>
<th>VOC</th>
<th>CO</th>
<th>NOₓ</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAE - Test Cell 45 (new emission unit)</td>
<td>A</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>BAE - BLR 7, BLR 8, BLR 9, RZ1, RZ2, RZ3, VCT1 and VCT2 (new emission units)</td>
<td>B</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>BAE - Test Cell 48N (existing emission unit)</td>
<td>C</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.35</td>
<td>0.10</td>
<td>1.69</td>
</tr>
<tr>
<td>BAE - Test Cell 48S (existing emission unit)</td>
<td>D</td>
<td>0.34</td>
<td>0.34</td>
<td>0.34</td>
<td>0.36</td>
<td>0.38</td>
<td>1.28</td>
</tr>
<tr>
<td>BAE - Test Cell 51N (existing emission unit)</td>
<td>E</td>
<td>0.34</td>
<td>0.34</td>
<td>0.34</td>
<td>1.24</td>
<td>0.34</td>
<td>5.90</td>
</tr>
<tr>
<td>BAE Project total</td>
<td>EAE = A+B+C+D+E</td>
<td>0.77</td>
<td>0.77</td>
<td>0.77</td>
<td>1.95</td>
<td>0.81</td>
<td>8.86</td>
</tr>
</tbody>
</table>

### Projected Actual Emissions (45 (new) 48N, 48S, 51N (all existing)) **


### Total PTE from BLR 7, BLR 8, BLR 9, RZ1, RZ2, RZ3, VCT1 and VCT2

| H | 1.64 | 0.72 | 0.24 | 0.019 | 0.18 | 2.68 | 3.19 |

### Projected Actual Emissions Entire Project


### Project Emissions Increase


### PSD Significant Levels

| 25 | 15 | 10 | - | 40 | 100 | 40 |

### Emission Offset Significant Levels

| - | - | - | 40 | - | - | - |

** PTEs are based on the fuel usage limits taken by the source in order to render the requirements of 326 IAC 2-2 and 326 IAC 2-3 not applicable to this modification.
<table>
<thead>
<tr>
<th></th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO2</th>
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</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>25.24</td>
<td>0.81</td>
<td>8.86</td>
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<td>PTE boilers</td>
<td>3.186235294</td>
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<td>2.68</td>
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<td>0.72</td>
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<td>PSD Threshold</td>
<td>39.9</td>
<td>39.9</td>
<td>99.9</td>
<td>24.9</td>
<td>14.9</td>
<td>9.9</td>
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<tr>
<td>E.F (Diesel)</td>
<td>2.083</td>
<td>0.19</td>
<td>0.131</td>
<td>0.015</td>
<td>0.015</td>
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<td>0.929</td>
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<tr>
<td>lb / gallon diesel</td>
<td>0.089874969</td>
<td>0.008197909</td>
<td>0.005652242</td>
<td>0.000647203</td>
<td>0.000647203</td>
<td>0.040068358</td>
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<tr>
<td>Eq. Diesel Usage</td>
<td>1,378,691</td>
<td>9,888,979</td>
<td>37,536,648</td>
<td>74,263,780</td>
<td>46,215,352</td>
<td>32,225,819</td>
<td>1,991,596</td>
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</tbody>
</table>

**Methodology**

To convert from E.F. g/hp-hr to lb/gallon diesel

\[
lb/gallon = E.F \times (1/7000 \text{ btu/hp-hr}) \times 137,000 \text{ btu/gallon} \times 1/453.6 \text{ lb/gr} \]

**Fuel Conversions**

- **NG**
  
  convert mmscf to gallon diesel
  
  \[
  1000 \text{ mmBtu/mmscf} \times \frac{1 \text{ gallon diesel}}{0.137 \text{ mmBtu}} = 7299.270073 \text{ gallon/mmscf}
  \]

- **Propane**
  
  convert mmscf to gallon diesel
  
  \[
  2572 \text{ mmBtu/mmscf} \times \frac{1 \text{ gallon diesel}}{137 \text{ mmBtu}} = 18,773.72 \text{ gallon/mmscf}
  \]

- **Gasoline**
  
  76,1000 btu/gallon gasoline * 1 gallon diesel/137,000 btu
  
  = 0.56 gallon diesel/gallon gasoline
## Fuel Equivalency Factors

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>PM</th>
<th>PM2.5</th>
<th>SO2</th>
</tr>
</thead>
<tbody>
<tr>
<td>lb pollutant/gallon diesel</td>
<td>0.09</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.04</td>
</tr>
</tbody>
</table>

### Diesel:

- **hp <= 600 or mmbtu <= 4.2**
  - AP-42 EF (lb/hp-hr): 0.03, 0.03, 0.01, 0.00, 0.00, 0.00, 0.002, 0.002
  - Equivalent EF (lb/gallon diesel): 0.61, 0.49, 0.13, 0.04, 0.04, 0.04, 0.04, 0.04
  - Fuel equivalency EV (unit less): 6.75, 5.96, 23.13, 66.53, 66.53, 66.53, 1.00

- **hp > 600 or mmbtu > 4.2**
  - AP-42 EF (lb/hp-hr): 0.02, 0.011, 0.001, 0.001, 0.001, 0.001, 0.001, 0.001
  - Equivalent EF (lb/gallon diesel): 0.47, 0.01, 0.11, 0.01, 0.01, 0.01, 0.01, 0.01
  - Fuel equivalency EV (unit less): 5.23, 1.68, 19.04, 21.17, 12.13, 11.77, 0.06

### Natural Gas or Propane:

#### RICE 2SLB
- AP-42 EF (lb/MMBtu): 3.17E+00, 1.20E-01, 3.86E-01, 3.84E-02, 4.83E-02, 4.83E-02, 5.88E-04
- Equivalent EF (lb/mmscf): 3170.00, 120.00, 386.00, 38.40, 48.31, 48.31, 0.59
- Fuel equivalency EV (gal diesel/mmscf): 35271, 14638, 68291, 59332, 74644, 74644, 15

#### RICE 4SLB
- AP-42 EF (lb/MMBtu): 4.08E+00, 1.18E-01, 3.17E-01, 7.71E-02, 9.99E-03, 9.99E-03, 5.88E-04
- Equivalent EF (lb/mmscf): 4080.00, 118.00, 317.00, 9.99, 9.99, 9.99, 0.59
- Fuel equivalency EV (gal diesel/mmscf): 45396, 14394, 56848, 119, 15431, 15431, 15

#### RICE 4SRB
- AP-42 EF (lb/MMBtu): 2.21E+00, 2.98E-02, 3.72E+00, 9.50E-03, 1.94E-02, 1.94E-02, 5.88E-04
- Equivalent EF (lb/mmscf): 2210.00, 29.60, 3720.00, 9.50, 19.41, 19.41, 0.59
- Fuel equivalency EV (gal diesel/mmscf): 24590, 3611, 583146, 14679, 29991, 29991, 15

### Gasoline: Gasoline power engine
- AP-42 EF (lb/MMBtu): 1.63, 3.03, 0.99, 0.10, 0.10, 0.10, 0.084, 0.000
- Equivalent EF (lb/gallon diesel): 0.22, 0.42, 0.24, 0.24, 0.24, 0.24, 0.24, 0.24
- Fuel equivalency EV (unit less): 2, 51, 24, 21, 21, 21, 0.29

**Propane:** Use NG
### Actual Emissions Test Cell ETC-68N

#### Running Hours

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Start Date</th>
<th>End Date</th>
<th>Hours Run</th>
</tr>
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<tbody>
<tr>
<td>123456</td>
<td>5/1/2009</td>
<td>8/1/2009</td>
<td>12345</td>
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<tr>
<td>789012</td>
<td>3/1/2010</td>
<td>6/1/2010</td>
<td>23456</td>
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<td>345678</td>
<td>1/1/2011</td>
<td>4/1/2011</td>
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<td>901234</td>
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<td>5/1/2012</td>
<td>34567</td>
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#### Emissions Factors

<table>
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<tr>
<th>Pollutant</th>
<th>Factor Code</th>
<th>Emission Factor Source</th>
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<tbody>
<tr>
<td>NOx</td>
<td>0501</td>
<td>Non-road diesel engines</td>
</tr>
<tr>
<td>CO</td>
<td>0101</td>
<td>Diesel engines</td>
</tr>
<tr>
<td>PM2.5</td>
<td>0201</td>
<td>Tier 3-2006, Engine Output: 300 &lt; hp &lt; 600</td>
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</table>

#### Environmental Impact

**PM2.5**

Baseline period: September 2010 to August 2013

<table>
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<tr>
<th>Date</th>
<th>Value</th>
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<td>8/1/2010</td>
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<td>9/1/2011</td>
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### Notes

- SSM No. 097-41322-00310
- Calculating the Baseline Actual Emissions.
<table>
<thead>
<tr>
<th>Model</th>
<th>Start Date</th>
<th>End Date</th>
<th>Pollutant</th>
<th>Tier</th>
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<tbody>
<tr>
<td>Cummins ISB-2010</td>
<td>1/1/2009</td>
<td>6/1/2009</td>
<td>SO2</td>
<td>Tier 3</td>
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<td>Isuzu Duramax LMM</td>
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<td>2/1/2011</td>
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<td>CO</td>
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<td>1/1/2013</td>
<td>2/1/2015</td>
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<td></td>
<td>1/1/2016</td>
<td>5/1/2018</td>
<td>PM10</td>
<td>Tier 3</td>
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*Updated every 12 months.*

Allison Transmission, Inc. - Speedway Main Campus
<table>
<thead>
<tr>
<th>Engine Model</th>
<th>Tier</th>
<th>HP Range</th>
<th>Model Year</th>
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<th>Reference</th>
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<th>Horse</th>
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</tr>
</tbody>
</table>
### Natural Gas Combustion Only

**MM BTU/HR <100**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM*</th>
<th>PM10*</th>
<th>direct PM2.5*</th>
<th>SO2</th>
<th>VOC</th>
<th>CO</th>
<th>NOx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>1.9</td>
<td>7.6</td>
<td>7.6</td>
<td>0.6</td>
<td>5.5</td>
<td>84</td>
<td>100</td>
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<tr>
<td><strong>Total</strong></td>
<td>0.06</td>
<td>0.24</td>
<td>0.24</td>
<td>0.02</td>
<td>0.18</td>
<td>2.68</td>
<td>3.19</td>
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</tbody>
</table>

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined. PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx:**
- Uncontrolled = 100
- Low NOx Burner = 50
- Low NOx Burners/Flue gas recirculation = 32

### Methodology

All emission factors are based on normal firing.

**MMBtu = 1,000,000 Btu**

**MMCF = 1,000,000 Cubic Feet of Gas**

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

#### Table

<table>
<thead>
<tr>
<th>Heat Input Capacity</th>
<th>Potential Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td>mmBtu/hr</td>
<td>mmscf</td>
</tr>
<tr>
<td>VET BLR 1</td>
<td>2.4</td>
</tr>
<tr>
<td>VET BLR 2</td>
<td>2.4</td>
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<tr>
<td>VET BLR 3</td>
<td>1.5</td>
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<td>Renzor furnace RZ1</td>
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<tr>
<td>Renzor furnace RZ2</td>
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<tr>
<td>Renzor furnace RZ3</td>
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</table>

**Potential Emission (tons/yr):**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>VET BLR 1</th>
<th>VET BLR 2</th>
<th>VET BLR 3</th>
<th>Renzor furnace RZ1</th>
<th>Renzor furnace RZ2</th>
<th>Renzor furnace RZ3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>0.02</td>
<td>0.02</td>
<td>0.01</td>
<td>0.003</td>
<td>0.003</td>
<td>0.003</td>
<td>0.06</td>
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<tr>
<td>PM10*</td>
<td>0.08</td>
<td>0.08</td>
<td>0.01</td>
<td>0.013</td>
<td>0.013</td>
<td>0.013</td>
<td>0.24</td>
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<tr>
<td>SO2</td>
<td>0.08</td>
<td>0.049</td>
<td>0.049</td>
<td>0.013</td>
<td>0.013</td>
<td>0.013</td>
<td>0.24</td>
</tr>
<tr>
<td>VOC</td>
<td>0.06</td>
<td>0.004</td>
<td>0.004</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
<td>0.02</td>
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<tr>
<td>CO</td>
<td>0.85</td>
<td>0.035</td>
<td>0.541</td>
<td>0.009</td>
<td>0.009</td>
<td>0.009</td>
<td>0.18</td>
</tr>
<tr>
<td>NOx</td>
<td>1.01</td>
<td>0.644</td>
<td>0.644</td>
<td>0.144</td>
<td>0.144</td>
<td>0.144</td>
<td>2.68</td>
</tr>
</tbody>
</table>

**Potential Emission (tons/yr):**

| VET BLR 1 | 0.02 | 0.08 | 0.01 | 0.06 | 0.85 | 1.01 |
| VET BLR 2 | 0.02 | 0.08 | 0.01 | 0.06 | 0.85 | 1.01 |
| VET BLR 3 | 0.012| 0.049| 0.049| 0.004| 0.035| 0.541|
| Renzor furnace RZ1 | 0.003| 0.013| 0.013| 0.001| 0.009| 0.144|
| Renzor furnace RZ2 | 0.003| 0.013| 0.013| 0.001| 0.009| 0.144|
| Renzor furnace RZ3 | 0.003| 0.013| 0.013| 0.001| 0.009| 0.144|
| Total | 0.06 | 0.24 | 0.24 | 0.02 | 0.18 | 2.68 |

**Total Potential Emission (tons/yr):**

| VET BLR 1 | 0.02 | 0.08 | 0.01 | 0.06 | 0.85 | 1.01 |
| VET BLR 2 | 0.02 | 0.08 | 0.01 | 0.06 | 0.85 | 1.01 |
| VET BLR 3 | 0.012| 0.049| 0.049| 0.004| 0.035| 0.541|
| Renzor furnace RZ1 | 0.003| 0.013| 0.013| 0.001| 0.009| 0.144|
| Renzor furnace RZ2 | 0.003| 0.013| 0.013| 0.001| 0.009| 0.144|
| Renzor furnace RZ3 | 0.003| 0.013| 0.013| 0.001| 0.009| 0.144|
| Total | 0.06 | 0.24 | 0.24 | 0.02 | 0.18 | 2.68 |

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined. PM2.5 emission factor is filterable and condensable PM2.5 combined.*
## VET Cooling Towers

<table>
<thead>
<tr>
<th></th>
<th>Total Dissolved Solids (ppm)</th>
<th>Drift Loss (%)</th>
<th>Drift Mass Emission Rate (lb/h)</th>
<th>Total PM Emission Rate (lb/h)</th>
<th>Total PM(_{10}) Emission Rate (lb/h)</th>
<th>Total PM(_{2.5}) Emission Rate (lb/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VCT1</strong></td>
<td>3,000</td>
<td>24,000</td>
<td>0.0005%</td>
<td>7.51</td>
<td>0.18</td>
<td>0.79</td>
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Drift mass Emission rate (lb/hr) = Circulation rate (GPM) x 8.34 (water density lbs/Gal) x 60 min/hr x 0.001%
PM Emission Rate (lbs/hour) = Drift Mass Rate x TDS (PPM) / 10^6
Tons/year = lb/hr x 8760 (hrs/yr) / 2000 (lbs/ton)
PM10 fraction of PM = 29.9712%
PM2.5 Fraction of PM = 0.1767%
January 30, 2020

Teresa Colson  
ALLISON TRANSMISSION INC  SPEEDWAY MAIN CAMPUS  
1 Allison Way MC M29  
Indianapolis, IN  46222  

Re: Public Notice  
Allison Transmission, Inc. - Speedway Main Campus  
Permit Level: Title V Significant Source Mod. (Minor PSD/EO) (120) & Title V Renewal  
Permit Number: 097-41322-00310 & 097-41349-00310  

Dear Teresa Colson:  

Enclosed is a copy of your draft Title V Significant Source Mod. (Minor PSD/EO) (120) & Title V Renewal, Technical Support Document, emission calculations, and the Public Notice.  

The Public Notice period will begin the date the Notice is published on the IDEM Official Public Notice website. Publication has been requested and is expected within 2-3 business days. You may check the exact Public Notice begins and ends date here: https://www.in.gov/idem/5474.htm  

Please note that as of April 17, 2019, IDEM is no longer required to publish the notice in a newspaper.  

OAQ has submitted the draft permit package to the Speedway Public Library, 5633 W 25th St in Speedway IN  46224-3899. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.  

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Mehul Sura, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 3-6868 or dial (317) 233-6868.  

Sincerely,  

L. Pogost  
Permits Branch  
Office of Air Quality  

Enclosures  
PN Applicant Cover Letter 4/12/19
January 30, 2020

To: Speedway Public Library 5633 W 25th St Speedway IN 46224-3899 (Library)

From: Jenny Acker, Branch Chief
Permits Branch
Office of Air Quality

Subject: Important Information to Display Regarding a Public Notice for an Air Permit

Applicant Name: Allison Transmission, Inc. - Speedway Main Campus
Permit Number: 097-41322-00310 & 097-41349-00310

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Draft Permit and Technical Support Document

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. Please make this information readily available until you receive a copy of the final package.

If you have any questions concerning this public review process, please contact Joanne Smiddle-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures
PN Library updated 4/2019
Notice of Public Comment

January 30, 2020
Allison Transmission, Inc. - Speedway Main Campus
097-41322-00310 & 097-41349-00310

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has posted on IDEM’s Public Notice website at https://www.in.gov/idem/5474.htm.

The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana’s Air Permitting Program.

Please Note: If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.

Enclosure
PN AAA Cover Letter 4/12/2019
### Mail Code 61-53

**Name and address of Sender**

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<td>Holly Argiris Environmental Resources Management (ERM) 8425 Woodfield Crossing Blvd., #580-W Indianapolis IN 43240 (Consultant)</td>
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| Total number of Pieces Received at Post Office | Postmaster, Per (Name of Receiving employee) | The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50,000 per occurrence. The maximum indemnity payable on Express mail merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on insured and COD mail. See International Mail Manual for limitations of coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels. |

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