NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

Preliminary Findings Regarding the Renewal and New Source Review of a
Federally Enforceable State Operating Permit (FESOP)

for Sony DADC in Vigo County

FESOP Renewal and New Source Review No.: F 167-42914-00032

The Indiana Department of Environmental Management (IDEM) has received an application from Sony DADC, located at 1800 North Fruitridge Avenue, Terre Haute, Indiana 47804 for a new source review and renewal of its FESOP issued on December 17, 2012. If approved by IDEM’s Office of Air Quality (OAQ), this proposed permit would allow Sony DADC to make certain changes at its existing source. Sony DADC has applied to renew its FESOP permit and has notified IDEM about three unpermitted emission units.

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). The potential to emit regulated air pollutants will continue to be limited to less than the Title V and PSD major threshold levels. 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.

IDEM is aware that the abrasive blasters has been constructed and operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take appropriate action. This draft permit contains provisions to bring unpermitted equipment into compliance with construction and operation permit rules.

A copy of the permit application and IDEM’s preliminary findings have been sent to:

Vigo County Public Library
One Library Square
Terre Haute, IN 47807

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

A copy of the application and preliminary findings is also available via IDEM’s Virtual File Cabinet (VFC). To access 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 F 167-42914-00032 in all correspondence.

Comments should be sent to:

Andrea C. Smith
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for Andrea C. Smith or (317) 234-6543
Or dial directly: (317) 234-6543
Fax: (317) 232-6749 attn: Andrea C. Smith
E-mail: acsmith@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/idem/airquality/2356.htm; and the Citizens’ Guide to IDEM on the Internet at: http://www.in.gov/idem/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 be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM’s decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above and will also be sent to the local library indicated above, and the IDEM public file room on the 12th floor of the Indiana Government Center North, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251.

If you have any questions, please contact Andrea C. Smith of my staff at the above address.

Brian Williams, Section Chief
Permits Branch
Office of Air Quality
New Source Review (NSR) and Federally Enforceable State Operating Permit Renewal
OFFICE OF AIR QUALITY

Sony DADC
1800 North Fruitridge Street, Terre Haute, Indiana 47804
1700 North Fruitridge Avenue, Terre Haute, Indiana 47804;
1600 North Fruitridge Avenue, Terre Haute, Indiana 47804; and
1400 North Fruitridge Avenue, Terre Haute, Indiana 47804
(herein known as the Permittee) is hereby authorized to construct and 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. 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 2-8 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.

Indiana statutes from IC 13 and rules from 326 IAC, quoted 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 FESOP under 326 IAC 2-8.

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An Equal Opportunity Employer
TABLE OF CONTENTS

SECTION A  SOURCE SUMMARY ......................................................................................................... 5
A.1 General Information [326 IAC 2-8-3(b)]
A.2 Source Definition
A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]
A.4 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]
A.5 FESOP Applicability [326 IAC 2-8-2]

SECTION B  GENERAL CONDITIONS ................................................................................................. 10
B.1 Definitions [326 IAC 2-8-1]
B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]
B.3 Term of Conditions [326 IAC 2-1.1-9.5]
B.4 Enforceability [326 IAC 2-8-6][IC 13-17-12]
B.5 Severability [326 IAC 2-8-4(4)]
B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]
B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]
B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]
B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]
B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]
B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]
B.12 Emergency Provisions [326 IAC 2-8-12]
B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]
B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]
B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-5(C)][326 IAC 2-8-7(a)]
B.16 Permit Renewal [326 IAC 2-8-3(h)]
B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]
B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]
B.19 Source Modification Requirement [326 IAC 2-8-11.1]
B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]
B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]
B.22 Annual Fee Payment [326 IAC 2-7-19][326 IAC 2-8-4(6)][326 IAC 2-8-16][326 IAC 2-1.1-7]
B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314][326 IAC 1-1-6]

SECTION C  SOURCE OPERATION CONDITIONS ............................................................................. 20

Emission Limitations and Standards [326 IAC 2-8-4(1)] .................................................................. 20
C.1 Overall Source Limit [326 IAC 2-8]
C.2 Opacity [326 IAC 5-1]
C.3 Open Burning [326 IAC 4-1][IC 13-17-9]
C.4 Incineration [326 IAC 4-2][326 IAC 9-1-2]
C.5 Fugitive Dust Emissions [326 IAC 6-4]
C.6 Asbestos Abatement Projects [326 IAC 14-10][326 IAC 18][40 CFR 61, Subpart M]

Testing Requirements [326 IAC 2-8-4(3)] .................................................................................. 22
C.7 Performance Testing [326 IAC 3-6]

Compliance Requirements [326 IAC 2-1.1-11] ............................................................................. 22
C.8 Compliance Requirements [326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-8-4(1)][326 IAC 2-8-5(a)(1)] .......................... 23
C.9 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]
C.10 Instrument Specifications [326 IAC 2-1.1-11][326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)] .......................... 23
C.11 Risk Management Plan [326 IAC 2-8-4][40 CFR 68]
C.12 Response to Excursions or Exceedances [326 IAC 2-8-4][326 IAC 2-8-5]  
C.13 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]  

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] .................................................. 24  
C.14 General Record Keeping Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-5]  
C.15 General Reporting Requirements [326 IAC 2-8-4(3)(C)][326 IAC 2-1.1-11]  

Stratospheric Ozone Protection .......................................................................................................... 26  
C.16 Compliance with 40 CFR 82 and 326 IAC 22-1  

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS .................................................................. 27  
Emission Limitations and Standards [326 IAC 2-8-4(1)] ................................................................. 29  
D.1.1 Particulate Matter Limitation (PM) [326 IAC 6.5]  
D.1.2 Sulfur Dioxide (SO₂) [326 IAC 7-4-3.1]  
D.1.3 Sulfur Dioxide (SO₂) [326 IAC 7-4-3][326 IAC 7-2-1]  
D.1.4 FESOP Limitations [326 IAC 2-8-4]  
D.1.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]  

Compliance Determination Requirements [326 IAC 2-8-4(1)] ...................................................... 30  
D.1.6 Particulate Matter  
D.1.7 Sulfur Dioxide Emissions and Sulfur Content  

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)] .................................. 31  
D.1.8 Visible Emissions Notations  
D.1.9 Quarterly Inspections  

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-16] ......................... 32  
D.1.10 Record Keeping Requirements  
D.1.11 Reporting Requirements  

SECTION E.1 NSPS ............................................................................................................................ 33  
New Source Performance Standards Requirements [326 IAC 2-8-4(1)] ...................................... 33  
E.1.2 New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60, Subpart III]  

SECTION E.2 NESHAP .......................................................................................................................... 34  
National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-8-4(1)] ......................................................................................................................... 35  

SECTION E.3 NESHAP .......................................................................................................................... 37  
National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-8-4(1)] ......................................................................................................................... 37  

CERTIFICATION ................................................................................................................................. 38  
EMERGENCY OCCURRENCE REPORT .............................................................................................. 39  
FESOP Quarterly Report ..................................................................................................................... 41
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT .......................................................... 42

Attachment A - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR 60, Subpart III]
Attachment B - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ]
Attachment C - National Emission Standards for Hazardous Air Pollutants for Plating and Polishing Operations [40 CFR 63, Subpart WWWWWW]
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 2-8-3(b)]

The Permittee owns and operates a stationary manufacturing plant for optical discs.

| Source Address: | 1800 North Fruitridge Street, Terre Haute, Indiana 47804 |
| General Source Phone Number: | 812-462-8100 |
| SIC Code: | 3652 (Phonograph Records and Prerecorded Audio Tapes and Disks) |
| County Location: | Vigo |
| Source Location Status: | Attainment for all criteria pollutants |
| Source Status: | Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories |

A.2 Source Definition

This Source Definition from the FESOP Renewal was incorporated into this permit as follows:

During the review of this source's renewal application, this stationary manufacturing plant for optical discs was determined to consist of four (4) plants:

(a) Plant 1800 is located at 1800 North Fruitridge Avenue, Terre Haute, Indiana 47804;
(b) Plant 1700 is located at 1700 North Fruitridge Avenue, Terre Haute, Indiana 47804;
(c) Plant 1600 is located at 1600 North Fruitridge Avenue, Terre Haute, Indiana 47804; and
(d) Plant 1400 is located at 1400 North Fruitridge Avenue, Terre Haute, Indiana 47804.

These plants are located on one or more contiguous or adjacent properties, have the same two-digit SIC code and are under common ownership and control, therefore they are considered one (1) source, as defined by 326 IAC 2-7-1(22).

Note: The 1800 North Fruitridge Avenue, Terre Haute, Indiana 47804 will be considered the main address for this plant.

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

(a) One (1) printing operation, consisting of three silk screen printers and eighteen offset printers, constructed between 2005 and 2010, with a combined maximum capacity of 104,375 units per hour, using no VOC control.

(b) One (1) jig cleaning process, consisting of the following:

(1) One (1) jig cleaner, utilizing a chemical process using phosphoric acid and sodium hydroxide. This process has negligible potential to emit any regulated pollutants and uses non-VOC materials.
(2) One (1) Jig Wash blast operation, with a totally enclosed dust collector, consisting of five (3) blast units and the mold maintenance with one blast unit, utilizing plastic beads and alumina as media at a maximum flow rate of 742.2 pounds of media per hour each, exhausting inside the building:

(a) One (1) aluminum/silicon blaster - chemical jigwash, Blast 3, installed in 2005 (permitted in 2020)
(b) Siz Blaster - Blast Room by Receiving, Blast 8, installed in 2016 (permitted in 2020)
(c) Media Blaster for Aluminum/Silicon Dust - Mold Maintenance, Blast 4, installed in 2008 (permitted in 2020)

(3) Two (2) IPA dip tanks, each having a maximum capacity of five (5) gallons, and each having VOC emissions potential of less than 15 pounds per day.

(4) Two (2) graphite jig coating units with solvent, having VOC emissions potential of less than 15 pounds per day. One of these units is approved for construction in 2011.

(5) One (1) totally enclosed dust blast unit with dust collector, identified as Blast 7, utilizing a mixture of plastic beads and alumina as media at a maximum flow rate of 274.7 pounds of media per hour each, installed in 2011, exhausting inside the building.

(c) Eleven (11) boilers, consisting of the following:

(1) Kewanee Boiler Corp. boiler, located in C Area, installed before 1983, identified as Unit 1, with a maximum heat input capacity of 10.462 million BTU per hour with a 8369 MBH rating, firing natural gas with #2 fuel oil for backup, using no control, and exhausting to stack S19.

(2) Kewanee Boiler Corp. boiler, located in C Area, installed before 1983, identified as Unit 2, with a maximum heat input capacity of 10.462 million BTU per hour, with an 8369 MBH rating, firing natural gas with #2 fuel oil for backup, using no control, and exhausting to stack S13.

(3) Burnham Corp. boiler, located in D Area, installed in 1986, identified as Unit 3, with a maximum heat input capacity of 9.863 million BTU per hour, with a rating of 9256 MBH, firing natural gas with #2 fuel oil for backup, using no control, and exhausting to stack S4.

(4) Burnham Corp. boiler, located in D Area, installed in 1986, identified as Unit 4, with a maximum heat input capacity of 9.863 million BTU per hour, with a rating of 9256 MBH, firing natural gas with #2 fuel oil for backup, using no control, and exhausting to stack S3.

(5) One (1) Cleaver Brooks boiler, installed in 1977, identified as Unit 014, with a maximum heat input capacity of 4.19 million BTU per hour with a rating of 4190 MBH, firing natural gas only, using no control, and exhausting to stack 014.

(6) One (1) Cleaver Brooks boiler, installed in 1994, identified as Unit 015, with a maximum heat input capacity of 4.50 million BTU per hour, with a rating of 6420 MBH firing natural gas only, using no control, and exhausting to stack 015.
(7) One (1) Cleaver Brooks boiler, located at 1400 West, installed in 1974, identified as Unit 016, with a maximum heat input capacity of 4.00 million BTU per hour, firing natural gas only, using no control, and exhausting to stack 016.

(8) One (1) Cleaver Brooks boiler, installed in 1972, located at 1600, identified as Unit 017, with a maximum heat input capacity of 8.36 million BTU per hour, with a rating of 8369 MBH, firing natural gas only, using no control, and exhausting to stack 017.

(9) One (1) Cleaver Brooks boiler, installed in 1972, identified as Unit 018, with a maximum heat input capacity of 8.36 million BTU per hour, with a rating 8369 MBH, firing natural gas and utilizing #2 fuel oil as back-up, using no control, and exhausting to stack 018.

(10) One (1) Cleaver Brooks boiler, installed in 2007, located in F Area, identified as Unit 019, with a maximum heat input capacity of 7.19 million BTU per hour, with a rating of 9362 MBH, firing natural gas only, using low NOx burners, and exhausting to stack 019.

(11) One (1) Cleaver Brooks boiler, installed in 2016, located in F Area, identified as Unit 020, with a maximum heat input capacity of 8.80 million BTU per hour, with a rating of 8400 MBH, firing natural gas only, using low NOx burner, and exhausting to stack 020.

(d) One (1) plastic scrap shredders, installed in 2009, with cyclone and baghouse for particulate control, used to grind non-conforming material for recycling.

(e) One (1) abrasive blasting unit, identified as Blast 5, constructed in 2011, with a totally enclosed dust collector, utilizing plastic beads and alumina as media at a maximum flow rate of 274.7 pounds of media per hour, and exhausting inside the building.

(f) One (1) abrasive blasting unit, identified as Blast 6, constructed in 2011, with a totally enclosed dust collector, utilizing plastic beads and alumina as media at a maximum flow rate of 196.5 pounds of media per hour, and exhausting inside the building.

A.4 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

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

(b) The following VOC and HAP storage containers:

(1) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids; and

(2) Packaging lubricants and greases.

(c) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.

(d) Closed loop heating and cooling systems.
(e) Exposure chambers, for curing of ultraviolet inks and ultraviolet coatings where heat is the intended discharge.

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

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

(h) Paved and unpaved roads and parking lots with public access.

(i) Enclosed systems for conveying plastic raw materials and plastic finished goods.

(j) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling towers.

(k) Emergency generators as follows: Diesel generators not exceeding 1600 horsepower including:

1. Onan Cummins diesel emergency generator, installed in 1991, identified as Unit 007, with a maximum capacity of 166 HP, firing #2 fuel only, using no control, and exhausting to stack 007. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

2. Onan Corp. diesel emergency generator, located in A Area, installed in 1986, identified as Unit 008, with a maximum capacity of 70 kW, firing #2 fuel only, using no control, and exhausting to stack 008. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

3. Onan Corp. diesel emergency generator, located in D Area, installed in 1992, identified as Unit 009, with a maximum capacity of 188 BHP, firing #2 fuel only, using no control, and exhausting to stack 009. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

4. Caterpillar Corp. diesel emergency generator, installed in 2007, identified as Unit 010, with a maximum capacity of 77 HP, firing #2 fuel only, using no control, and exhausting to stack 010. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

Under 40 CFR Part 60, Subpart III, this is an affected unit.

5. Onan Corp. diesel emergency generator, installed in 1998, with a maximum capacity of 450 kW, firing #2 fuel only, using no control, and exhausting to stack 013. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

6. One (1) diesel emergency generator identified as Unit 021, installed in 2004, with a maximum capacity of 884 HP, firing #2 fuel only, using no control and exhausting to stack 021. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

Under 40 CFR 63, Subpart ZZZZ, these emergency generators are considered affected sources.
(l) Stationary fire pumps, consisting of the following:

1. One (1) diesel emergency fire pump, located at 35 St, identified as Unit 011, installed in 1971, with a maximum capacity of 255 HP, using No. 2 diesel fuel only, using no controls; and

2. One (1) diesel emergency fire pump, located at 1800 NW, identified as Unit 026, installed in 1986, with a maximum capacity of 225 HP, using No. 2 diesel fuel only, using no controls.

Under 40 CFR 63, Subpart ZZZZ, these pumps are considered affected sources.

(m) Other insignificant activities, including:

1. Tank T1 - 55 gallon No. 2 fuel oil storage tank for Emergency Generator 'A' Electrical.

2. Tank T2-550 gallon No. 2 fuel oil storage tank next to IS Emergency Generator

3. Tank T3 - 5,000 gallon No. 2 fuel oil storage tank, with potential emissions less than five pounds per year.

4. Tanks T4 and T5 are each 300 gallon No. 2 fuel oil storage tanks, one each Fire Pump Tank House.

5. Tank 6 - 800 gallon No. 2 fuel oil storage tank for the I.S. emergency generator

6. One (1) Emergency Generator day tank (Tank 7) - 100 gallons in Electrical room -1400.

7. One (1) Emergency Generator day tank (Tank 8) - 1,000 gallons in South Alley behind 1400.

8. Tank 9 - 500 gallons No. 2 fuel oil tank, located West of umbilical outside 1600 Boiler Room door #22.

9. One nickel plating operation, consisting of thirty-three (33) BD Electroplating Baths using a wetting agent, fume suppressant and venting to a control device.


10. One (1) injection molding process, installed before 2010, using non-VOC materials to manufacture polycarbonate optical discs. This process has no expected VOC emissions.

A.5 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).
SECTION B  GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]
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 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]
(a) This permit, F167-42914-00032, is issued for a fixed term of ten (10) 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, 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 2-8-6][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 2-8-4(4)]
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 2-8-4(5)(D)]
This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(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 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

(1) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), 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) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

(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 July 1 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

(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 2-8-4(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
### B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

### B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]

(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 2-8-5(a)(1) by an “authorized individual” as defined by 326 IAC 2-1.1-1(1).

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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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.12 Emergency Provisions [326 IAC 2-8-12]

(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 except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or 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 2-8-4(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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 2-8-3(c)(6) 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 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) 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.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

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

(a) All terms and conditions of permits established prior to F167-42914-00032 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,
(2) revised, or
(3) deleted.

(b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

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 2-8-3(h) and 326 IAC 2-8-9.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State 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 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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 2-8-8(a)]

(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 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(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 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

(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 2-8-3. 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
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 2-8 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 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) and (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 approval required by 326 IAC 2-8-11.1 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 2-8-15(b)(1) and (c). 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 2-8-15(b)(1) and (c).

(b) Emission Trades [326 IAC 2-8-15(b)]

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 2-8-15(b).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(c)]

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 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

(d) 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.19 Source Modification Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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 FESOP 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, at reasonable times, 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, at reasonable times, 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, at reasonable times, 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.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19][326 IAC 2-8-4(6)][326 IAC 2-8-16][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ no later than 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) 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.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][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

#### Entire Source

**Emission Limitations and Standards [326 IAC 2-8-4(1)]**

<table>
<thead>
<tr>
<th>C.1 Overall Source Limit [326 IAC 2-8]</th>
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<tbody>
<tr>
<td>The purpose of this permit is to limit this source’s potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.</td>
</tr>
<tr>
<td>(a) Pursuant to 326 IAC 2-8:</td>
</tr>
<tr>
<td>(1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.</td>
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<tr>
<td>(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and</td>
</tr>
<tr>
<td>(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.</td>
</tr>
<tr>
<td>(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.</td>
</tr>
<tr>
<td>(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source’s potential to emit does not exceed the above specified limits.</td>
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<tr>
<td>(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.</td>
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<tr>
<th>C.2 Opacity [326 IAC 5-1]</th>
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<tbody>
<tr>
<td>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:</td>
</tr>
<tr>
<td>(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.</td>
</tr>
<tr>
<td>(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.</td>
</tr>
</tbody>
</table>

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<tr>
<th>C.3 Open Burning [326 IAC 4-1][IC 13-17-9]</th>
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<tbody>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>
C.4 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.5 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).

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(c).

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

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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
(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.

Testing Requirements [326 IAC 2-8-4(3)]

C.7 Performance Testing [326 IAC 3-6]

(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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 2-8-4(1)][326 IAC 2-8-5(a)(1)]

C.9 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.10 Instrument Specifications [326 IAC 2-1.1-1][326 IAC 2-8-4(3)][326 IAC 2-8-5(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 2-8-4][326 IAC 2-8-5(a)(1)]

C.11 Risk Management Plan [326 IAC 2-8-4][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.12 Response to Excursions or Exceedances [326 IAC 2-8-4][326 IAC 2-8-5]
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.13 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.14 General Record Keeping Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-5]

(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 FESOP.

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.15 General Reporting Requirements [326 IAC 2-8-4(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 2-8-5(a)(1) by an “authorized individual” as defined by 326 IAC 2-1.1-1(1). 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.
Stratospheric Ozone Protection

C.16 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

#### Emissions Unit Description:

(b) One (1) jig cleaning process, consisting of the following:

1. One (1) jig cleaner, utilizing a chemical process using phosphoric acid and sodium hydroxide. This process has negligible potential to emit any regulated pollutants and uses non-VOC materials.

2. One (1) Jig Wash blast operation, with a totally enclosed dust collector, consisting of five (3) blast units and the mold maintenance with one blast unit, utilizing plastic beads and alumina as media at a maximum flow rate of 742.2 pounds of media per hour each, exhausting inside the building:

   - (a) One (1) aluminum/silicon blaster - chemical jigwash, Blast 3, installed in 2005 (permitted in 2020)
   - (b) Siz Blaster - Blast Room by Receiving, Blast 8, installed in 2016 (permitted in 2020)
   - (c) Media Blaster for Aluminum/Silicon Dust - Mold Maintenance, Blast 4, installed in 2008 (permitted)

5. One (1) totally enclosed blast unit with dust collector, identified as Blast 7, utilizing a mixture of plastic beads and alumina as media at a maximum flow rate of 274.7 pounds of media per hour each, constructed in 2011, exhausting inside the building.

(c) Eleven (11) boilers, consisting of the following:

1. Kewanee Boiler Corp. boiler, located in C Area, installed before 1983, identified as Unit 1, with a maximum heat input capacity of 10.462 million BTU per hour with a 8369 MBH rating, firing natural gas with #2 fuel oil for backup, using no control, and exhausting to stack S19.

2. Kewanee Boiler Corp. boiler, located in C Area, installed before 1983, identified as Unit 2, with a maximum heat input capacity of 10.462 million BTU per hour, with an 8369 MBH rating, firing natural gas with #2 fuel oil for backup, using no control, and exhausting to stack S13.

3. Burnham Corp. boiler, located in D Area, installed in 1986, identified as Unit 3, with a maximum heat input capacity of 9.863 million BTU per hour, with a rating of 9256 MBH, firing natural gas with #2 fuel oil for backup, using no control, and exhausting to stack S4.

4. Burnham Corp. boiler, located in D Area, installed in 1986, identified as Unit 4, with a maximum heat input capacity of 9.863 million BTU per hour, with a rating of 9256 MBH, firing natural gas with #2 fuel oil for backup, using no control, and exhausting to stack S3.

5. One (1) Cleaver Brooks boiler, installed in 1977, identified as Unit 014, with a maximum heat input capacity of 4.19 million BTU per hour with a rating of 4190 MBH, firing natural gas only, using no control, and exhausting to stack 014.

6. One (1) Cleaver Brooks boiler, installed in 1994, identified as Unit 015, with a maximum heat input capacity of 4.50 million BTU per hour, with a rating of 6420 MBH firing natural gas only, using no control, and exhausting to stack 015.
(7) One (1) Cleaver Brooks boiler, located at 1400 West, installed in 1974, identified as Unit 016, with a maximum heat input capacity of 4.00 million BTU per hour, firing natural gas only, using no control, and exhausting to stack 016.

(8) One (1) Cleaver Brooks boiler, installed in 1972, located at 1600, identified as Unit 017, with a maximum heat input capacity of 8.36 million BTU per hour, with a rating of 8369 MBH, firing natural gas only, using no control, and exhausting to stack 017.

(9) One (1) Cleaver Brooks boiler, installed in 1972, identified as Unit 018, with a maximum heat input capacity of 8.36 million BTU per hour, with a rating 8369 MBH, firing natural gas and utilizing #2 fuel oil as back-up, using no control, and exhausting to stack 018.

(10) One (1) Cleaver Brooks boiler, installed in 2007, located in F Area, identified as Unit 019, with a maximum heat input capacity of 7.19 million BTU per hour, with a rating of 9362 MBH, firing natural gas only, using low NOx burners, and exhausting to stack 019.

(11) One (1) Cleaver Brooks boiler, installed in 2016, located in F Area, identified as Unit 020, with a maximum heat input capacity of 8.80 million BTU per hour, with a rating of 8400 MBH, firing natural gas only, using low NOx burner, and exhausting to stack 020.

(d) One (1) plastic scrap shredders, installed in 2009, with cyclone and baghouse for particulate control, used to grind non-conforming material for recycling.

(e) One (1) abrasive blasting unit, identified as Blast 5, constructed in 2011, with a totally enclosed dust collector, utilizing plastic beads and alumina as media at a maximum flow rate of 274.7 pounds of media per hour, and exhausting inside the building.

(f) One (1) abrasive blasting unit, identified as Blast 6, constructed in 2011, with a totally enclosed dust collector, utilizing plastic beads and alumina as media at a maximum flow rate of 196.5 pounds of media per hour, and exhausting inside the building.

The following insignificant activities:

(k) Emergency generators as follows: Diesel generators not exceeding 1600 horsepower including:

(1) Onan Cummins diesel emergency generator, installed in 1991, identified as Unit 007, with a maximum capacity of 166 HP, firing #2 fuel only, using no control, and exhausting to stack 007. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

(2) Onan Corp. diesel emergency generator, located in A Area, installed in 1986, identified as Unit 008, with a maximum capacity of 70 kW, firing #2 fuel only, using no control, and exhausting to stack 008. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

(3) Onan Corp. diesel emergency generator, located in D Area, installed in 1992, identified as Unit 009, with a maximum capacity of 188 BHP, firing #2 fuel only, using no control, and exhausting to stack 009. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

(4) Caterpillar Corp. diesel emergency, installed in 2007, identified as Unit 010, with a
maximum capacity of 77 HP, firing #2 fuel only, using no control, and exhausting to stack 010. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

Under 40 CFR Part 60, Subpart IIII, this is an affected unit.

(5) Onan Corp. diesel emergency generator, installed in 1998, with a maximum capacity of 450 kW, firing #2 fuel only, using no control, and exhausting to stack 013. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

(6) One (1) diesel emergency generator identified as Unit 021, installed in 2004, with a maximum capacity of 884 HP, firing #2 fuel only, using no control and exhausting to stack 021. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

Under 40 CFR 63, Subpart ZZZZ, these emergency generators are considered affected sources.

(l) Stationary emergency fire pumps, consisting of the following:

(1) One (1) diesel emergency fire pump, located at 35 St, identified as Unit 011, installed in 1971, with a maximum capacity of 255 HP, using No. 2 diesel fuel only, using no controls; and

(2) One (1) diesel emergency fire pump, located at 1800 NW, identified as Unit 026, installed in 1986, with a maximum capacity of 225 HP, using No. 2 diesel fuel only, using no controls.

Under 40 CFR 63, Subpart ZZZZ, these pumps are considered affected sources.

(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 2-8-4(1)]

D.1.1 Particulate Matter Limitation (PM) [326 IAC 6.5]

(a) Pursuant to 326 IAC 6.5 (Particulate Emissions Limitations), particulate matter emissions from each abrasive blasting unit and each plastic scrap shredder shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

(b) Particulate emissions from the boiler units when using No. 2 fuel oil shall not exceed twenty-seven hundredths (0.27) grams per million kcal (fifteen-hundredths (0.15) pound per million Btu.

(c) Particulate emissions from the boiler units when using natural gas shall not exceed one-hundredth (0.01) per dry standard cubic foot (dscf).

(d) Particulate emissions from each emergency generator and stationary fire pump shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).
D.1.2 Sulfur Dioxide (SO₂) [326 IAC 7-4-3.1]

Pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations):

(a) The SO₂ emissions from the boiler units 001, 002, 003, 004, 018 shall not exceed five tenths (0.5) pounds per million Btu heat input each; and

(b) The sulfur content of the fuel oil shall not exceed five-tenths percent (0.5%) by weight.

D.1.3 Sulfur Dioxide (SO₂) [326 IAC 7-4-3][326 IAC 7-2-1]

Pursuant to 326 IAC 7-4-3 (SO₂ Emissions Limitations) the SO₂ emissions from the Kewanee Boilers (Boiler Units 001 and 002) shall not exceed thirty-six hundredths (0.36) pounds per MMBtu heat input, each.

D.1.4 FESOP Limitations [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following limits:

(a) The usage of No. 2 fuel oil in the boilers (Units 1, 2, 3, 4, and 18) shall be limited to 2,467,500 U.S. gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The SO2 emissions from the boilers (Units 1, 2, 3, 4, and 18) shall not exceed 0.071 pounds SO2 per gallon of No. 2 Fuel Oil used.

(c) The PM10 emissions after the dust collector from the Jig Blast Wash Operation shall not exceed 13.36 lbs/hr.

(d) The PM2.5 emissions after the dust collector from the Jig Blast Wash Operation shall not exceed 13.36 lbs/hr.

Compliance with these limits, combined with all other PM10, PM2.5, and SO₂ emissions at this source, shall limit the source-wide potential to emit PM10, PM2.5, and SO₂ to less than 100 tons per twelve (12) consecutive month period, each and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) not applicable.

D.1.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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.

Compliance Determination Requirements [326 IAC 2-8-4(1)]

D.1.6 Particulate Matter

In order to ensure compliance with Conditions D.1.1 and D.1.4, each internal dust collection system shall be in operation at all times when each abrasive blasting unit is in operation, and operated in accordance with manufacturer's specifications, in order to comply with this limit.

D.1.7 Sulfur Dioxide Emissions and Sulfur Content

Compliance with the fuel oil sulfur limitation in Conditions D.1.2, D.1.3 and D.1.4 shall be determined utilizing one of the following options for the boiler units 1, 2, 3, 4, and 18:

(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 vendor certification;
or

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

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

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

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

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

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.1.8 Visible Emissions Notations

(a) Visible emission notations of each boiler (units 1, 2, 3, 4, and 18) stack exhaust shall be performed once per day during normal daylight operations when combusting fuel oil, in accordance with the following:

(1) A trained employee shall record whether emissions are normal or abnormal.

(2) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(3) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(4) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(5) If abnormal emissions are observed, the Permittee shall take reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.9 Quarterly Inspections

The Permittee shall perform quarterly inspections of the dust collectors controlling particulate emissions from the abrasive blasting operations 3, 5, 7, 6, 8, and 4 to verify that they are being operated and maintained in accordance with the manufacturer's specifications. Inspections required by this condition shall not be performed in consecutive months. All defective dust collectors shall be replaced.
Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-16]

D.1.10 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.3 and the Permittee shall maintain records in accordance with (1) through (6) below.

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

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

(3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period. The natural gas fired boiler certification does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by the "authorized individual" as defined by 326 IAC 2-1.1-1(1); 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 fuel oil.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

(b) To document the compliance status with Condition D.1.8, the Permittee shall maintain daily records of the visible emission notations of each boiler (units 1, 2, 3, 4, and 18) stack exhausts while combusting fuel oil. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document the compliance status with Condition D.1.9, the Permittee shall maintain records of the dates and results of the quarterly inspections required under Condition D.1.9.

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

D.1.11 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.1.4(a) shall be submitted not later than thirty (30) days after the end of the 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 the certification that meets the requirements of 326 IAC 2-8-5(a)(1) by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
SECTION E.1 NSPS

Emissions Unit Description:

Insignificant Activities

(4) Caterpillar Corp. diesel emergency, installed in 2007, identified as Unit 010, with a maximum capacity of 77 HP, firing #2 fuel only, using no control, and exhausting to stack 010. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

Under 40 CFR Part 60, Subpart IIII, this is an affected unit.

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

New Source Performance Standards Requirements [326 IAC 2-8-4(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 as 326 IAC 12-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart IIII.

(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 New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60, Subpart IIII]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart IIII (included as Attachment A to the operating permit), for the emission unit(s) listed above:

(1) 40 CFR 60.4200
(2) 40 CFR 60.4202(a)(2)
(3) 40 CFR 60.4205(b)
(4) 40 CFR 60.4206
(5) 40 CFR 60.4207(a),(b),(c)
(6) 40 CFR 60.4209(a)
(7) 40 CFR 60.4211(a),(c), (e), (f)(1), (f)(2)(i), (f)(3)
(8) 40 CFR 60.4214(b)
(9) 40 CFR 60.4218
(10) 40 CFR 60.4219
(11) Table 8
SECTION E.2  NESHAP

Emissions Unit Description:

Insignificant Activities

(k) Emergency generators as follows: Diesel generators not exceeding 1600 horsepower including:

(1) Onan Cummins diesel emergency generator, installed in 1991, identified as Unit 007, with a maximum capacity of 166 HP, firing #2 fuel only, using no control, and exhausting to stack 007. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

(2) Onan Corp. diesel emergency generator, located in A Area, installed in 1986, identified as Unit 008, with a maximum capacity of 70 kW, firing #2 fuel only, using no control, and exhausting to stack 008. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

(3) Onan Corp. diesel emergency generator, located in D Area, installed in 1992, identified as Unit 009, with a maximum capacity of 188 BHP, firing #2 fuel only, using no control, and exhausting to stack 009. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

(4) Caterpillar Corp. diesel emergency, installed in 2007, identified as Unit 010, with a maximum capacity of 77 HP, firing #2 fuel only, using no control, and exhausting to stack 010. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.


(5) Onan Corp. diesel emergency generator, installed in 1998, with a maximum capacity of 450 kW, firing #2 fuel only, using no control, and exhausting to stack 013. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

(6) One (1) diesel emergency generator identified as Unit 021, installed in 2004, with a maximum capacity of 884 HP, firing #2 fuel only, using no control and exhausting to stack 021. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

Under 40 CFR 63, Subpart ZZZZ, these emergency generators are considered affected sources.

(l) Stationary fire pumps, consisting of the following:

(1) One (1) diesel emergency fire pump, located at 35 St, identified as Unit 011, installed in 1971, with a maximum capacity of 255 HP, using No. 2 diesel fuel only, using no controls; and

(2) One (1) diesel emergency fire pump, located at 1800 NW, identified as Unit 026, installed in 1986, with a maximum capacity of 225 HP, using No. 2 diesel fuel only, using no controls.
Under 40 CFR 63, Subpart ZZZZ, these pumps are considered affected sources.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-8-4(1)]


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<td>(a)</td>
<td>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 as 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart ZZZZ.</td>
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<td>(b)</td>
<td>Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:</td>
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The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment B to the operating permit), for the emission unit(s) listed above:

Units: 007, 008, 009, 013, 021

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<td>40 CFR 63.6580</td>
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<td>Table 2d (item 4)</td>
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<td>Table 6 (item 9)</td>
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<td>(19)</td>
<td>Table 8</td>
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Units: 010

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<td>(3)</td>
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<td>40 CFR 63.6595(a)(6)</td>
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(5)  40 CFR 63.6665
(6)  40 CFR 63.6670
(7)  40 CFR 63.6675
SECTION E.3 NESHAP

**Emissions Unit Description:**

Insignificant Activities

(10) One nickel plating operation, consisting of thirty-three (33) BD Electroplating Baths using a wetting agent, fume suppressant and venting to a control device.


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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-8-4(1)]


(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 as 326 IAC 20-1, for the emission unit(s) listed above, except as 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


The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart WWWW (included as Attachment C to the operating permit), for the emission unit(s) listed above:

(1) 40 CFR 63.11504(a)
(2) 40 CFR 63.11505(a), (c), and (d)
(3) 40 CFR 63.11506(c)
(4) 40 CFR 63.11507(g)
(5) 40 CFR 63.11508(a), (b), (c)(7), and (d)(1,2, and 6)
(6) 40 CFR 63.11509(a), (b), (c)(6 and 7), (d), (e), and (f)
(7) 40 CFR 63.11510
(8) 40 CFR 63.11511
(9) 40 CFR 63.11512
(10) Table 1
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION  

Source Name: Sony Digital Audio disc Corporation  
Source Address: 1800 North Fruitridge Street, Terre Haute, Indiana 47804  
FESOP Permit No.: F167-42914-00032  

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.  

Please check what document is being certified:  

- [ ] Annual Compliance Certification Letter  
- [ ] Test Result (specify) ____________________________  
- [ ] Report (specify) ____________________________  
- [ ] Notification (specify) ____________________________  
- [ ] Affidavit (specify) ____________________________  
- [ ] Other (specify) ____________________________  

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:  
Date:
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
Phone: (317) 233-0178  
Fax: (317) 233-6865  

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
EMERGENCY OCCURRENCE REPORT  

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<tr>
<th>Source Name:</th>
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<tr>
<td>Source Address:</td>
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<tr>
<td>FESOP Permit No.:</td>
<td>F167-42914-00032</td>
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This form consists of 2 pages

<table>
<thead>
<tr>
<th>Facility/Equipment/Operation:</th>
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<tr>
<th>Control Equipment:</th>
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<tr>
<th>Permit Condition or Operation Limitation in Permit:</th>
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<tr>
<th>Description of the Emergency:</th>
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<tr>
<th>Describe the cause of the Emergency:</th>
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☐ 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 2-8-12  

If any of the following are not applicable, mark N/A
If any of the following are not applicable, mark N/A

| Date/Time Emergency started: | |
| Date/Time Emergency was corrected: | |
| Was the facility being properly operated at the time of the emergency? | Y | N |

Type of Pollutants Emitted: TSP, PM-10, SO$_2$, VOC, NO$_x$, CO, Pb, other:

Estimated amount of pollutant(s) emitted during emergency:

Describe the steps taken to mitigate the problem:

Describe the corrective actions/response steps taken:

Describe the measures taken to minimize emissions:

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:

Form Completed by: ________________________________________________
Title / Position: ____________________________________________________
Date: ____________________________________________________________
Phone: ____________________________________________________________
Source Name: Sony Digital Audio disc Corporation  
Source Address: 1800 North Fruittidge Street, Terre Haute, Indiana 47804  
FESOP Permit No.: F167-42914-00032  
Facility: Boilers (Units 1, 2, 3, 4, and 018)  
Parameter: No. 2 fuel oil usage limit to limit SO2 emissions  
Limit: The usage of No. 2 fuel oil with a sulfur content of 0.5% and No. 2 fuel oil in the boilers (1, 2, 3, 4, and 18) shall be limited to 2,467,500 U.S. gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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<tr>
<th>QUARTER:</th>
<th>YEAR:</th>
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<tbody>
<tr>
<td>Column 1</td>
<td>Column 2</td>
</tr>
<tr>
<td>Month</td>
<td>No. 2 fuel oil usages</td>
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<tr>
<td>This Month</td>
<td>Previous 11 Months</td>
</tr>
</tbody>
</table>

☐ No deviation occurred in this quarter.  
☐ Deviation/s occurred in this quarter.  
Deviation has been reported on: ___________________

Submitted by: _____________________________________________________  
Title / Position: ____________________________________________________  
Signature: ________________________________________________________  
Date: ____________________________________________________________  
Phone: ___________________________________________________________
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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<th>Permit Requirement (specify permit condition #)</th>
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<td>Probable Cause of Deviation:</td>
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<td>Response Steps Taken:</td>
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<td>Response Steps Taken:</td>
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<td>Response Steps Taken:</td>
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Form Completed by: _______________________________________________________

Title / Position: ___________________________________________________________

Date: ___________________________________________________________________

Phone: _________________________________________________________________
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 CI 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 CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE that are not fire pump engines 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 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 CI 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

(2) Marine offshore installations.

(h) 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 (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-hr (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) where 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 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 37968, June 28, 2011; 81 FR 44219, July 7, 2016]

§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 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) $45 \cdot n^{-0.2}$ 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 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) Limit the emissions of PM in the stationary Cl internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

(e) Owners and operators of emergency stationary Cl 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 Cl 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 Cl 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 Cl internal combustion engine?

Owners and operators of stationary Cl ICE must operate and maintain stationary Cl 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 Cl internal combustion engine subject to this subpart?

(a) Beginning October 1, 2007, owners and operators of stationary Cl 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 Cl 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 Cl 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 Cl 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 Cl ICE produced in previous model years?

(a) After December 31, 2008, owners and operators may not install stationary Cl 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 AECDs for qualified emergency situations according to the requirements of 40 CFR 1039.665. Manufacturers of stationary CI ICE equipped with AECDs 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 AECD 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 AECD 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 comply by purchasing 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.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37970, June 28, 2011; 78 FR 6695, Jan. 30, 2013; 81 FR 44219,
July 7, 2016]

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:

\[ \text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \]  \hspace{1cm} (Eq. 1)

Where:

\( \text{STD} = \) 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:

\( \text{STD} = \) 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.

$$C_{adj} = C_d \times \frac{5.9}{20.9 - \% O_2} \quad \text{(Eq. 3)}$$

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:

\[
F₀ = \frac{0.209 F_d}{F_c}
\]  

(Eq. 4)

Where:

F₀ = Fuel factor based on the ratio of O₂ volume to the ultimate CO₂ volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is O₂, percent/100.

F₆ = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm³/J (dscf/10⁶ Btu).

F₆ = 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:

\[
X_{CO₂} = \frac{5.9}{F₀}
\]  

(Eq. 5)

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 NOₓ and PM gas concentrations adjusted to 15 percent O₂ using CO₂ as follows:

\[
C_{adj} = C_d \frac{X_{CO₂}}{%CO₂}
\]  

(Eq. 6)

Where:

C_{adj} = Calculated NOₓ or PM concentration adjusted to 15 percent O₂.

C_d = Measured concentration of NOₓ or PM, uncorrected.

%CO₂ = Measured CO₂ 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}} \quad \text{(Eq. 7)}

Where:

ER = \text{Emission rate in grams per KW-hour.}

C_d = \text{Measured NOX concentration in ppm.}

1.912 \times 10^{-3} = \text{Conversion constant for ppm NOX to grams per standard cubic meter at 25 degrees Celsius.}

Q = \text{Stack gas volumetric flow rate, in standard cubic meter per hour.}

T = \text{Time of test run, in hours.}

KW-hour = \text{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}} \quad \text{(Eq. 8)}

Where:

ER = \text{Emission rate in grams per KW-hour.}

C_{adj} = \text{Calculated PM concentration in grams per standard cubic meter.}

Q = \text{Stack gas volumetric flow rate, in standard cubic meter per hour.}

T = \text{Time of test run, in hours.}

KW-hour = \text{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 · n^{-0.2} g/KW-hr (34 · 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 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 · n^{-0.23} g/KW-hr (33 · 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).

[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></td>
<td>NMHC + NOx</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>
Maximum engine power & 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 in g/KW-hr (g/HP-hr)

<table>
<thead>
<tr>
<th>Engine power</th>
<th>NMHC + NO X</th>
<th>HC</th>
<th>NO X</th>
<th>CO</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>450≤KW≤560 (600≤HP≤750)</td>
<td>1.3 (1.0)</td>
<td>9.2 (6.9)</td>
<td>11.4 (8.5)</td>
<td>0.54 (0.40)</td>
<td></td>
</tr>
<tr>
<td>KW&gt;560 (HP&gt;750)</td>
<td>1.3 (1.0)</td>
<td>9.2 (6.9)</td>
<td>11.4 (8.5)</td>
<td>0.54 (0.40)</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 to Subpart III 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

[As stated in §60.4202(a)(1), you must comply with the following emission standards]

<table>
<thead>
<tr>
<th>Engine power</th>
<th>Model year(s)</th>
<th>NOx + NMHC</th>
<th>CO</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>KW&lt;8 (HP&lt;11)</td>
<td>2008 +</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>2008 +</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>2008 +</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 III of Part 60—Certification Requirements for Stationary Fire Pump Engines

As stated in §60.4202(d), you must certify new stationary fire pump engines beginning with the following model years:

<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 + NOx</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>8.0 (6.0)</td>
<td>0.40 (0.30)</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>6.6 (4.9)</td>
<td>0.40 (0.30)</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>5.5 (4.1)</td>
<td>0.40 (0.30)</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 +¹</td>
<td>4.7 (3.5)</td>
<td>5.0 (3.7)</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 +¹</td>
<td>4.7 (3.5)</td>
<td>5.0 (3.7)</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 +²</td>
<td>4.0 (3.0)</td>
<td>5.0 (3.7)</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 +³</td>
<td>4.0 (3.0)</td>
<td>3.5 (2.6)</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 +³</td>
<td>4.0 (3.0)</td>
<td>3.5 (2.6)</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>3.5 (2.6)</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>3.5 (2.6)</td>
<td>0.20 (0.15)</td>
</tr>
</tbody>
</table>

¹For 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.

²For 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.

³In 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.
### 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.</td>
<td>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>(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>(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></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></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>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) 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 3 traverse points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii. Determine the O\textsubscript{2} concentration of the stationary internal combustion engine exhaust at the sampling port location;</td>
<td>(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2</td>
<td>(b) Measurements to determine O\textsubscript{2} concentration must be made at the same time as the measurement for NO\textsubscript{x} concentration.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and</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 measurement for NO\textsubscript{x} concentration.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>iv. 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>(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) NO\textsubscript{x} concentration must be at 15 percent O\textsubscript{2}, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.</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>
## Complying with the requirement to

<table>
<thead>
<tr>
<th>Each</th>
<th>You must</th>
<th>Using</th>
<th>According to the following requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ii. Measure O₂ at the inlet and outlet of the control device;</td>
<td>(2) 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 PM concentration.</td>
</tr>
<tr>
<td></td>
<td>iii. If necessary, measure moisture content at the inlet and outlet of the control device; and</td>
<td>(3) Method 4 of 40 CFR part 60, appendix A-3</td>
<td>(c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration.</td>
</tr>
<tr>
<td></td>
<td>iv. Measure PM at the inlet and outlet of the control device.</td>
<td>(4) Method 5 of 40 CFR part 60, appendix A-3</td>
<td>(d) PM 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>d. Limit the concentration of PM in the stationary CI internal combustion engine exhaust</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) If using a control device, the sampling site must be located at the outlet of the control device.</td>
</tr>
<tr>
<td></td>
<td>ii. Determine the O₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;</td>
<td>(2) 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 PM concentration.</td>
</tr>
<tr>
<td></td>
<td>iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and</td>
<td>(3) Method 4 of 40 CFR part 60, appendix A-3</td>
<td>(c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration.</td>
</tr>
<tr>
<td></td>
<td>iv. Measure PM at the exhaust of the stationary internal combustion engine.</td>
<td>(4) Method 5 of 40 CFR part 60, appendix A-3</td>
<td>(d) PM 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>
</tbody>
</table>

[79 FR 11251, Feb. 27, 2014]

### 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 modification</td>
<td>Yes</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 maintenance requirements</td>
<td>No</td>
<td>Requirements are specified in subpart III.</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 requirements</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>§60.19</td>
<td>General notification and reporting requirements</td>
<td>Yes</td>
<td></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 III, 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)(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.

(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 (CO2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO2 concentration is measured in lieu of oxygen concentration measurement, a CO2 correction factor is needed. Calculate the CO2 correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific \( F_o \) value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

\[
F_o = \frac{0.209 F_d}{F_c} \quad (Eq. \, 2)
\]

Where:
$F_0 =$ Fuel factor based on the ratio of oxygen volume to the ultimate CO$_2$ 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, dsm$^3$/J (dscf/106 Btu).

$F_c =$ Ratio of the volume of CO$_2$ produced to the gross calorific value of the fuel from Method 19, dsm$^3$/J (dscf/106 Btu)

(ii) Calculate the CO$_2$ correction factor for correcting measurement data to 15 percent O$_2$, as follows:

$$X_{CO2} = \frac{5.9}{F_0} \quad (Eq. 3)$$

Where:

$X_{CO2} =$ CO$_2$ correction factor, percent.

5.9 = 20.9 percent O$_2$—15 percent O$_2$, the defined O$_2$ correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O$_2$ using CO$_2$ as follows:

$$C_{adj} = C_d \cdot \frac{X_{CO2}}{\%CO2} \quad (Eq. 4)$$

Where:

$C_{adj} =$ Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O$_2$.

$C_d =$ Measured concentration of CO, THC, or formaldehyde, uncorrected.

$X_{CO2} =$ CO$_2$ correction factor, percent.

$\%CO2 =$ Measured CO$_2$ 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;
40 CFR 63, Subpart ZZZZ
Attachment B
Page 12 of 63
FESOP No. 167-42914-00032

(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 methods you will use to measure and the instruments you will use to monitor 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 CO\textsubscript{2} 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 combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, 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
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.


§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)(ii)(A) or 40
CFR 71.6(a)(3)(ii)(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)(ii)(A) or 40 CFR 71.6(a)(3)(ii)(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).


Other Requirements and Information

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

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. If you own or operate 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 4SRB stationary RICE</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>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>
<td></td>
</tr>
<tr>
<td>b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O₂</td>
<td></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 O&lt;sub&gt;2&lt;/sub&gt; 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. †</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 O&lt;sub&gt;2&lt;/sub&gt; and not using NSCR.</td>
<td>Comply with any operating limitations approved by the Administrator.</td>
</tr>
</tbody>
</table>

† Sources 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>
<th>During periods of startup you must . . .</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 O&lt;sub&gt;2&lt;/sub&gt;. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O&lt;sub&gt;2&lt;/sub&gt; until June 15, 2007.</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. †</td>
</tr>
<tr>
<td>2. 4SLB stationary RICE</td>
<td>a. Reduce CO emissions by 93 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O&lt;sub&gt;2&lt;/sub&gt;.</td>
<td></td>
</tr>
</tbody>
</table>
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 | During periods of startup you must . . . \\
| b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O₂ | \\

1Sources 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 | a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and \\
b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.  

2. 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 | b. Maintaining 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. 

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:

| For each . . . | You must meet the following requirement, except during periods of startup . . . | During periods of startup you must . . . |
---|---|---|
1. Emergency stationary CI RICE and black start stationary CI RICE1 | a. Change oil and filter every 500 hours of operation or annually, whichever comes first.2 | 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 |
| | 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.3 | |
2. Non-Emergency, non-black start stationary CI RICE <100 HP | a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first.2 | |
| | 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.3 | |
3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP | Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent \(O_2\). | |
<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>
| 4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500 | 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.                                                                                                                          |                                        |
| 5. Non-Emergency, non-black start stationary CI RICE >500 HP    | 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.                                                                                                                          |                                        |
| 6. Emergency stationary SI RICE and black start stationary SI RICE.| a. Change oil and filter every 500 hours of operation or annually, whichever comes first;  
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. |
| 7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE | a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;  
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. |
| 8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP | a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;  
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. |                                        |
For each . . . | You must meet the following requirement, except during periods of startup . . . | During periods of startup you must . . .
---|---|---
9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500 | Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O₂. |  
10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500 | Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O₂. |  
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500 | Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O₂. |  
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 | Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O₂. |  

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 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>
<tbody>
<tr>
<td>1. Non-Emergency, non-black start CI stationary RICE ≤300 HP</td>
<td>a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;¹</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.</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.</td>
<td></td>
</tr>
<tr>
<td>2. 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 at 15 percent O₂; or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Reduce CO emissions by 70 percent or more.</td>
<td></td>
</tr>
<tr>
<td>3. Non-Emergency, non-black start CI stationary RICE &gt;500 HP</td>
<td>a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O₂; or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Reduce CO emissions by 70 percent or more.</td>
<td></td>
</tr>
<tr>
<td>4. Emergency stationary CI RICE and black start stationary CI RICE.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></td>
<td>b. Inspect air cleaner every 1,000 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 500 hours of operation or annually, whichever comes first, and replace as necessary.</td>
<td></td>
</tr>
</tbody>
</table>
## For each . . .

You must meet the following requirement, except during periods of startup . . .

<table>
<thead>
<tr>
<th>Requirement</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.</td>
<td></td>
</tr>
<tr>
<td>a. Change oil and filter every 500 hours of operation or annually, whichever comes first; 1)</td>
<td></td>
</tr>
<tr>
<td>b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and</td>
<td></td>
</tr>
<tr>
<td>c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.</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>
</tr>
<tr>
<td>b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and</td>
<td></td>
</tr>
<tr>
<td>c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.</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>
</tr>
<tr>
<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>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>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>
</tr>
<tr>
<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>For each . . .</td>
<td>You must meet the following requirement, except during periods of startup . . .</td>
</tr>
<tr>
<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>
</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>
</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>
</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>
</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>
</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>
</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>
</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>
</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>
</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>
</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>
</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 stationary RICE</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</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 O\textsubscript{2} 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>
<td></td>
</tr>
<tr>
<td></td>
<td>ii. Measure the O\textsubscript{2} 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)\textsuperscript{ac} (heated probe not necessary)</td>
<td>(b) Measurements to determine O\textsubscript{2} must be made at the same time as the measurements for CO concentration.</td>
<td></td>
</tr>
<tr>
<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)\textsuperscript{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 O\textsubscript{2}, dry basis.</td>
<td></td>
</tr>
</tbody>
</table>
### Complying with the Requirement to Reduce Formaldehyde Emissions

**2. 4SRB Stationary RICE**

<table>
<thead>
<tr>
<th>For each</th>
<th>...</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>a. reduce formaldehyde emissions</td>
<td></td>
<td></td>
<td></td>
<td></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>
</tbody>
</table>

**i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and**

| | | | | (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) | (a) Measurements to determine O₂ concentration must be made at the same time as the measurements for formaldehyde or THC concentration. |

**ii. Measure O₂ at the inlet and outlet of the control device; and**

| | | | | (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 | (a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration. |

**iii. Measure moisture content at the inlet and outlet of the control device; and**

| | | | | (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 | (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. |

**iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formaldehyde at the inlet and the outlet of the control device**

| | | | | (1) Method 25A, reported as propane, of 40 CFR part 60, appendix A-7 | (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. |

**v. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device**
<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>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>(a) For formaldehyde, CO, 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. If using a control device, the sampling site must be located at the outlet of the control device.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></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) Measurements to determine O₂ concentration 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>ii. Determine the O₂ concentration of the stationary RICE exhaust at the sampling port location; and</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></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 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>iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></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>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>iv. Measure formaldehyde at the exhaust of the stationary RICE; or</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1) Method 10 of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (2005)ᵇᶜ, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03ᵃ</td>
<td>(a) CO 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>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>v. measure CO at the exhaust of the stationary RICE</td>
<td></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>
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<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>
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</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</td>
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<td>ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and</td>
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<td></td>
<td>iii. You have recorded the catalyst pressure drop and catalyst inlet temperature 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</td>
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<tr>
<td></td>
<td></td>
<td>ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and</td>
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<td></td>
<td>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</td>
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<td></td>
<td></td>
<td>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</td>
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<td></td>
<td></td>
<td>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≤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>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You have demonstrated initial compliance if . . .</td>
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<tr>
<td>12. 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. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust</td>
<td>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.</td>
</tr>
<tr>
<td>13. Existing non-emergency 4SLB stationary RICE &gt;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</td>
<td>a. Install an oxidation catalyst</td>
<td>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.</td>
</tr>
<tr>
<td>14. Existing non-emergency 4SRB stationary RICE &gt;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</td>
<td>a. Install NSCR</td>
<td>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.</td>
</tr>
</tbody>
</table>

[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:

<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>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, and new or reconstructed non-emergency CI stationary RICE &gt;500 HP located at a major source of HAP</td>
<td>a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS</td>
<td>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</td>
</tr>
</tbody>
</table>
### For each . . .

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Complying with the requirement to . . .</th>
<th>You must demonstrate continuous compliance by . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and</td>
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</tr>
<tr>
<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>
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<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;
- 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.
<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>5. 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. Collecting the approved operating parameter (if any) data according to §63.6625(b); and</td>
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<tr>
<td></td>
<td></td>
<td>ii. Reducing these data to 4-hour rolling averages; and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.</td>
</tr>
<tr>
<td>6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP</td>
<td>a. Reduce formaldehyde emissions</td>
<td>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.a</td>
</tr>
<tr>
<td>7. 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>a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR</td>
<td>i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limita; and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and</td>
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<tr>
<td></td>
<td></td>
<td>iii. Reducing these data to 4-hour rolling averages; and</td>
</tr>
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<td>iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and</td>
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<tr>
<td></td>
<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>
</tr>
<tr>
<td>8. 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>a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR</td>
<td>i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limita; and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii. Reducing these data to 4-hour rolling averages; and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.</td>
</tr>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You must demonstrate continuous compliance by . . .</td>
</tr>
<tr>
<td>----------------</td>
<td>----------------------------------------</td>
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</tr>
<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 ≤500 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 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 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>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You must demonstrate continuous compliance by . . .</td>
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<td></td>
<td>ii. Reducing these data to 4-hour rolling averages; and</td>
<td>iii. Reducing these data to 4-hour rolling averages; and</td>
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<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>iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.</td>
</tr>
<tr>
<td>12. Existing limited use CI stationary RICE &gt;500 HP</td>
<td>a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst</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>
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<tr>
<td></td>
<td></td>
<td>ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and</td>
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<td>iii. Reducing these data to 4-hour rolling averages; and</td>
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<td>iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and</td>
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<tr>
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<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>
</tr>
<tr>
<td>13. Existing limited use CI stationary RICE &gt;500 HP</td>
<td>a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using an oxidation catalyst</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>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and</td>
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<tr>
<td></td>
<td></td>
<td>iii. Reducing these data to 4-hour rolling averages; and</td>
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<tr>
<td></td>
<td></td>
<td>iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.</td>
</tr>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You must demonstrate continuous compliance by . . .</td>
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</tr>
<tr>
<td>14. Existing non-emergency 4SLB stationary RICE &gt;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</td>
<td>a. Install an oxidation catalyst</td>
<td>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 $O_2$; 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.</td>
</tr>
<tr>
<td>15. Existing non-emergency 4SRB stationary RICE &gt;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</td>
<td>a. Install NSCR</td>
<td>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 $O_2$, 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.</td>
</tr>
</tbody>
</table>

After 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 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≤HP≤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>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>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>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>

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

b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and

c. Any problems or errors suspected with the meters.

i. See item 2.a.i.
For each . . . | You must submit a . . . | The report must contain . . . | You must submit the report . . .
---|---|---|---
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</td>
<td>Subpart ZZZZ does not contain opacity or visible emission standards.</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>
</tr>
<tr>
<td>------------------------------</td>
<td>--------------------------------------------------------</td>
<td>--------------------</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>Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.</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>
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<tr>
<td>§63.8(a)(4)</td>
<td>Monitoring for control devices</td>
<td>No</td>
<td></td>
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<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 requirements</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>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------------------------</td>
<td>-------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</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) 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>
<td>-----------------------------</td>
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<tr>
<td>§63.10(a)</td>
<td>Administrative provisions for recordkeeping/reporting</td>
<td>Yes.</td>
<td></td>
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<tr>
<td>§63.10(b)(1)</td>
<td>Record retention</td>
<td>Yes</td>
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<tr>
<td>§63.10(b)(2)(i)-(v)</td>
<td>Records related to SSM</td>
<td>No.</td>
<td></td>
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<tr>
<td>§63.10(b)(2)(vi)-(xi)</td>
<td>Records</td>
<td>Yes.</td>
<td></td>
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<tr>
<td>§63.10(b)(2)(xii)</td>
<td>Record when under waiver</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.10(b)(2)(xiii)</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)(xiv)</td>
<td>Records of supporting documentation</td>
<td>Yes.</td>
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<tr>
<td>§63.10(b)(3)</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>
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<tr>
<td>§63.10(d)(2)</td>
<td>Report of performance test results</td>
<td>Yes.</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>
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<tr>
<td>§63.10(d)(5)</td>
<td>Startup, shutdown, and malfunction reports</td>
<td>No.</td>
<td></td>
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<tr>
<td>§63.10(e)(1) and (2)(i)</td>
<td>Additional CMS Reports</td>
<td>Yes.</td>
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<tr>
<td>§63.10(e)(2)(ii)</td>
<td>COMS-related report</td>
<td>No.</td>
<td>Subpart ZZZZ does not require COMS.</td>
</tr>
<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>
</tr>
<tr>
<td>§63.10(e)(4)</td>
<td>Reporting COMS data</td>
<td>No.</td>
<td>Subpart ZZZZ does not require COMS.</td>
</tr>
<tr>
<td>§63.10(f)</td>
<td>Waiver for recordkeeping/reporting</td>
<td>Yes.</td>
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</tr>
<tr>
<td>§63.11</td>
<td>Flares</td>
<td>No.</td>
<td></td>
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<tr>
<td>§63.12</td>
<td>State authority and delegations</td>
<td>Yes.</td>
<td></td>
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<tr>
<td>§63.13</td>
<td>Addresses</td>
<td>Yes.</td>
<td></td>
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<tr>
<td>§63.14</td>
<td>Incorporation by reference</td>
<td>Yes.</td>
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<tr>
<td>§63.15</td>
<td>Availability of information</td>
<td>Yes.</td>
<td></td>
</tr>
</tbody>
</table>

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 NO₂ 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 O₂ 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 O₂; 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

(1) “Development of an Electrochemical Cell Emission Analyzer Test Protocol”, Topical Report, Phil Juneau,

(2) “Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines,
Boilers, and Process Heaters Using Portable Analyzers”, EMC Conditional Test Protocol 30 (CTM-30), Gas Research

(3) “ICAC Test Protocol for Periodic Monitoring”, EMC Conditional Test Protocol 34 (CTM-034), The Institute of Clean
Air Companies, September 8, 1999.

Table 1: Appendix A—Sampling Run Data.

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Run Type: Pre-Sample Calibration Stack Gas Sample Post-Sample Cal. Check Repeatability Check

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[78 FR 6721, Jan. 30, 2013]
Federally Enforceable State Operating Permit (FESOP) No: 167-42914-00032

[Downloaded from the eCFR on July 15, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

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

Subpart WWWW—National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations

Source: 73 FR 37741, July 1, 2008, unless otherwise noted.

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]
§ 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; electroless plating 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.

§ 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
(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)(i) through (iii) of 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 use a control system to comply with 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.

*Electroplating 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.

<table>
<thead>
<tr>
<th>Citation</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>63.11</td>
<td>Applicability.</td>
</tr>
<tr>
<td>63.2</td>
<td>Definitions.</td>
</tr>
<tr>
<td>63.3</td>
<td>Units and abbreviations.</td>
</tr>
<tr>
<td>63.4</td>
<td>Prohibited activities.</td>
</tr>
<tr>
<td>63.6(a), (b)(1)-(b)(5), (c)(1), (c)(2), (c)(5), and (j)</td>
<td>Compliance with standards and maintenance requirements.</td>
</tr>
<tr>
<td>63.10(a), (b)(1), (b)(2)(i)-(iii), (xiv), (b)(3), (d)(1), (f)</td>
<td>Recordkeeping and reporting.</td>
</tr>
<tr>
<td>63.12</td>
<td>State authority and delegations.</td>
</tr>
<tr>
<td>63.13</td>
<td>Addresses of State air pollution control agencies and EPA regional offices.</td>
</tr>
<tr>
<td>63.14</td>
<td>Incorporation by reference.</td>
</tr>
<tr>
<td>63.15</td>
<td>Availability of information and confidentiality.</td>
</tr>
</tbody>
</table>

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]
Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Federally Enforceable State Operating Permit (FESOP) Renewal with New Source Review (NSR)

Source Description and Location

<table>
<thead>
<tr>
<th>Source Name:</th>
<th>Sony DADC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Location:</td>
<td>1800 North Fruitridge Avenue, Terre Haute, IN 47804</td>
</tr>
<tr>
<td>County:</td>
<td>Vigo (Harrison)</td>
</tr>
<tr>
<td>SIC Code:</td>
<td>3652 (Phonograph Records and Prerecorded Audio Tapes and Disks)</td>
</tr>
<tr>
<td>Permit Renewal No.:</td>
<td>F 167-42914-00032</td>
</tr>
<tr>
<td>Permit Reviewer:</td>
<td>Andrea C. Smith</td>
</tr>
</tbody>
</table>

On June 01, 2020, Sony DADC 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 Sony DADC relating to the operation of a stationary manufacturing plant for optical discs. Sony DADC was issued its first FESOP Renewal (F 167-28489-00032) on February 25, 2011.

Source Definition

During the review of this source's renewal application, this stationary manufacturing plant for optical discs was determined to consist of four (4) plants:

(a) Plant 1800 is located at 1800 North Fruitridge Avenue, Terre Haute, Indiana 47804;
(b) Plant 1700 is located at 1700 North Fruitridge Avenue, Terre Haute, Indiana 47804;
(c) Plant 1600 is located at 1600 North Fruitridge Avenue, Terre Haute, Indiana 47804;
(d) and Plant 1400 is located at 1400 North Fruitridge Avenue, Terre Haute, Indiana 47804.

These plants are located on one or more contiguous or adjacent properties, have the same two digit SIC code and are under common ownership and control, therefore they are considered one (1) source, as defined by 326 IAC 2-7-1(22).

The 1800 North Fruitridge Avenue, Terre Haute, Indiana 47804 will be considered the main address for this plant.

This determination was initially made under FESOP No. 167-32510-00032, issued on December 17, 2012.

Existing Approvals

<table>
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<tr>
<th>Permit Type</th>
<th>Permit Number</th>
<th>Issuance Date</th>
</tr>
</thead>
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<tr>
<td>FESOP Administrative Amendment</td>
<td>167-30581-00032</td>
<td>June 20, 2011</td>
</tr>
<tr>
<td>FESOP Administrative Amendment</td>
<td>167-30803-00032</td>
<td>October 03, 2011</td>
</tr>
<tr>
<td>FESOP Administrative Amendment</td>
<td>167-32510-00032</td>
<td>December 17, 2012</td>
</tr>
</tbody>
</table>

The source was issued FESOP Renewal No. F 167-28489-00032 on February 25, 2011. The source has since received the following approvals:
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) printing operation, consisting of three silk screen printers and eighteen offset printers, constructed between 2005 and 2010, with a combined maximum capacity of 104,375 units per hour, using no VOC control.

(b) One (1) jig cleaning process, consisting of the following:

1. One (1) jig cleaner, utilizing a chemical process using phosphoric acid and sodium hydroxide. This process has negligible potential to emit any regulated pollutants and uses non-VOC materials.

2. Two (2) IPA dip tanks, each having a maximum capacity of five (5) gallons, and each having VOC emissions potential of less than 15 pounds per day.

3. Two (2) graphite jig coating units with solvent, having VOC emissions potential of less than 15 pounds per day. One of these units was constructed in 2011.

4. One (1) totally enclosed dust blast unit with dust collector, identified as Blast 7, utilizing a mixture of plastic beads and alumina as media at a maximum flow rate of 274.7 pounds of media per hour each, installed in 2011, exhausting inside the building.

(c) Eleven (11) boilers, consisting of the following:

1. Kewanee Boiler Corp. boiler, located in C Area, installed before 1983, identified as Unit 1, with a maximum heat input capacity of 10.462 million BTU per hour with a 8369 MBH rating, firing natural gas with #2 fuel oil for backup, using no control, and exhausting to stack S19.

2. Kewanee Boiler Corp. boiler, located in C Area, installed before 1983, identified as Unit 2, with a maximum heat input capacity of 10.462 million BTU per hour, with an 8369 MBH rating, firing natural gas with #2 fuel oil for backup, using no control, and exhausting to stack S13.

3. Burnham Corp. boiler, located in D Area, installed in 1986, identified as Unit 3, with a maximum heat input capacity of 9.863 million BTU per hour, with a rating of 9256 MBH, firing natural gas with #2 fuel oil for backup, using no control, and exhausting to stack S4.

4. Burnham Corp. boiler, located in D Area, installed in 1986, identified as Unit 4, with a maximum heat input capacity of 9.863 million BTU per hour, with a rating of 9256 MBH, firing natural gas with #2 fuel oil for backup, using no control, and exhausting to stack S3.

5. One (1) Cleaver Brooks boiler, installed in 1977, identified as Unit 014, with a maximum heat input capacity of 4.19 million BTU per hour with a rating of 4190 MBH, firing natural gas only, using no control, and exhausting to stack 014.
(6) One (1) Cleaver Brooks boiler, installed in 1994, identified as Unit 015, with a maximum heat input capacity of 4.50 million BTU per hour, with a rating of 6420 MBH firing natural gas only, using no control, and exhausting to stack 015.

(7) One (1) Cleaver Brooks boiler, located at 1400 West, installed in 1974, identified as Unit 016, with a maximum heat input capacity of 4.00 million BTU per hour, firing natural gas only, using no control, and exhausting to stack 016.

(8) One (1) Cleaver Brooks boiler, installed in 1972, located at 1600, identified as Unit 017, with a maximum heat input capacity of 8.36 million BTU per hour, with a rating of 8369 MBH, firing natural gas only, using no control, and exhausting to stack 017.

(9) One (1) Cleaver Brooks boiler, installed in 1972, identified as Unit 018, with a maximum heat input capacity of 8.36 million BTU per hour, with a rating 8369 MBH, firing natural gas and utilizing #2 fuel oil as back-up, using no control, and exhausting to stack 018.

(10) One (1) Cleaver Brooks boiler, installed in 2007, located in F Area, identified as Unit 019, with a maximum heat input capacity of 7.19 million BTU per hour, with a rating of 9362 MBH, firing natural gas only, using low NOx burners, and exhausting to stack 019.

(11) One (1) Cleaver Brooks boiler, installed in 2016, located in F Area, identified as Unit 020, with a maximum heat input capacity of 8.80 million BTU per hour, with a rating of 8400 MBH, firing natural gas only, using low NOx burner, and exhausting to stack 020.

(d) One (1) plastic scrap shredders, installed in 2009, with cyclone and baghouse for particulate control, used to grind non-conforming material for recycling.

(e) One (1) abrasive blasting unit, identified as Blast 5, constructed in 2011, with a totally enclosed dust collector, utilizing plastic beads and alumina as media at a maximum flow rate of 274.7 pounds of media per hour, and exhausting inside the building.

(f) One (1) abrasive blasting unit, identified as Blast 6, constructed in 2011, with a totally enclosed dust collector, utilizing plastic beads and alumina as media at a maximum flow rate of 196.5 pounds of media per hour, and exhausting inside the building.

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**Emission Units and Pollution Control Equipment Removed From the Source**

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The source has removed the following emission units:

(a) One (1) dry ice blast operation, totally enclosed, using dry ice under pressure to clean parts. This process has negligible potential to emit any regulated pollutants.

(b) Removal of thirteen (13) offset printers from the printing operation in A.3(a).

(c) Superior Boiler Works boiler, installed in 1992, identified as Unit 005, with a maximum heat input capacity of 16.8 million BTU per hour, firing natural gas with #2 fuel oil for backup, using no control, and exhausting to stack 001.

Under 40 CFR 60, Subpart Dc, this is considered an affected facility.

(d) Superior Boiler Works boiler, installed in 1992, identified as Unit 006, with a maximum heat input capacity of 16.8 million BTU per hour, firing natural gas with #2 fuel oil for backup, using no control, and exhausting to stack 002.
Under 40 CFR 60, Subpart Dc, this is considered an affected facility.

(e) Cleaver Brooks Corp. boiler, installed in 1997, identified as Unit 012, with a maximum heat input capacity of 6.0 million BTU per hour, firing natural gas only, using no control, and exhausting to stack 012.

(d) One (1) plastic scrap shredders, installed prior to 1996, with cyclone and baghouse for particulate control, used to grind non-conforming material for recycling.

(g) Onan Corp. diesel emergency generator, installed in 1983, identified as Unit 007, with a maximum capacity of 115 BHP, firing #2 fuel only, using no control, and exhausting to stack 007. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

(h) Caterpillar Corp. diesel emergency, installed in 1986, identified as Unit 010, with a maximum capacity of 200 BHP, firing #2 fuel only, using no control, and exhausting to stack 010. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

(i) One (1) diesel emergency generator identified as Unit 022, installed in 2004, with a maximum capacity of 884 BHP, firing #2 fuel only, using no control and exhausting to stack 021. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

(j) One (1) diesel emergency identified as Unit 023, installed in 1971, with a maximum capacity of 54 BHP, firing #2 fuel only, using no control and exhausting to stack 023. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

(k) One (1) diesel emergency generator identified as Unit 024, installed in 1971, with a maximum capacity of 150 BHP, firing #2 fuel only, using no control and exhausting to stack 024. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

(l) One (1) diesel emergency identified as Unit 025, installed in 1958, with a maximum capacity of 54 BHP, firing #2 fuel only, using no control and exhausting to stack 025. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

(m) One nickel plating operation, consisting of one (1) electroplating tank operation and one (1) electroless tank operation, with a combined potential to emit VOC of less than three pounds per hour.


(n) One Screen Washing 3181-1 process, approved in 2012 for modification, using VOC materials. [326 IAC 8-3-2]
The source also consists of the following insignificant activities:

(a) Space heaters, process heaters, or boilers using the following fuels: Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) BTU per hour.

(b) The following VOC and HAP storage containers:
   (1) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids; and
   (2) Packaging lubricants and greases.

(c) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.

(d) Closed loop heating and cooling systems.

(e) Exposure chambers, for curing of ultraviolet inks and ultraviolet coatings where heat is the intended discharge.

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

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

(h) Paved and unpaved roads and parking lots with public access.

(i) Enclosed systems for conveying plastic raw materials and plastic finished goods.

(j) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling towers.

(k) Emergency generators as follows: Diesel generators not exceeding 1600 horsepower including:
   (1) Onan Cummins diesel emergency generator, installed in 1991, identified as Unit 007, with a maximum capacity of 166 HP, firing #2 fuel only, using no control, and exhausting to stack 007. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.
   (2) Onan Corp. diesel emergency generator, located in A Area, installed in 1986, identified as Unit 008, with a maximum capacity of 70 kW, firing #2 fuel only, using no control, and exhausting to stack 008. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.
   (3) Onan Corp. diesel emergency generator, located in D Area, installed in 1992, identified as Unit 009, with a maximum capacity of 188 BHP, firing #2 fuel only, using no control, and exhausting to stack 009. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.
(4) Caterpillar Corp. diesel emergency, installed in 2007, identified as Unit 010, with a maximum capacity of 77 HP, firing #2 fuel only, using no control, and exhausting to stack 010. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

Under 40 CFR Part 60, Subpart IIII, this is an affected unit.

(5) Onan Corp. diesel emergency generator, installed in 1998, with a maximum capacity of 450 kW, firing #2 fuel only, using no control, and exhausting to stack 013. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

(6) One (1) diesel emergency generator identified as Unit 021, installed in 2004, with a maximum capacity of 884 HP, firing #2 fuel only, using no control and exhausting to stack 021. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

Under 40 CFR 63, Subpart ZZZZ, these emergency generators are considered affected sources.

(l) Stationary fire pumps, consisting of the following:

(1) One (1) diesel emergency fire pump, located at 35 St, identified as Unit 011, installed in 1971, with a maximum capacity of 255 HP, using No. 2 diesel fuel only, using no controls; and

(2) One (1) diesel emergency fire pump, located at 1800 NW, identified as Unit 026, installed in 1986, with a maximum capacity of 225 HP, using No. 2 diesel fuel only, using no controls.

Under 40 CFR 63, Subpart ZZZZ, these pumps are considered affected sources.

(m) Other insignificant activities, including:

(1) Tank T1 - 55 gallon No. 2 fuel oil storage tank for Emergency Generator 'A' Electrical.

(2) Tank T2 - 550 gallon No. 2 fuel oil storage tank next to IS Emergency Generator

(3) Tank T3 - 5,000 gallon No. 2 fuel oil storage tank, with potential emissions less than five pounds per year.

(4) Tanks T4 and T5 are each 300 gallon No. 2 fuel oil storage tanks, one each Fire Pump Tank House.

(5) Tank 6 - 800 gallon No. 2 fuel oil storage tank for the I.S. emergency generator

(6) One (1) Emergency Generator day tank (Tank 7) - 100 gallons in Electrical room -1400.

(7) One (1) Emergency Generator day tank (Tank 8) - 1,000 gallons in South Alley behind 1400.

(8) Tank 9 - 500 gallons No. 2 fuel oil tank, located West of umbilical outside 1600 Boiler Room door #22.

(9) One (1) nickel plating operation, consisting of thirty-three (33) BD Electroplating Baths using a wetting agent, fume suppressant and venting to a control device.

(10) One (1) injection molding process, installed before 2010, using non-VOC materials to manufacture polycarbonate optical discs. This process has no expected VOC emissions.

**Emission Units and Pollution Control Equipment**

**Constructed Under the Provisions of 326 IAC 2-1.1-3 (Exemptions)**

As part of this permitting action, the source requested to add the following existing emission unit(s) constructed under the provisions of 326 IAC 2-1.1-3 (Exemptions):

(a) Onan Cummins diesel emergency generator, installed in 1983, identified as Unit 007, with a maximum capacity of 115 BHP, firing #2 fuel only, using no control, and exhausting to stack 007. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

(b) Caterpillar Corp. diesel emergency, installed in 1986, identified as Unit 010, with a maximum capacity of 200 BHP, firing #2 fuel only, using no control, and exhausting to stack 010. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

These emission unit(s) are identified under (326 IAC 2-1.1-3(e)(5)). The total potential to emit of the emission unit(s) is less than levels specified at 326 IAC 2-1.1-3(e)(1)(A) and the addition of the emission unit(s) did not require the source to transition to a higher operation permit level. Therefore, pursuant to 326 IAC 2-1.1-3(e), the permit revision requirements under 326 IAC 2-8-11.1, including the requirement to submit an application, do not apply to the emission unit(s). See Appendix A of this Technical Support Document for detailed emission calculations.

**Enforcement Issue**

IDEM is aware that equipment has been constructed and operated 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 operating rules.

**Emission Calculations**

See Appendix A of this Technical Support Document for detailed emission calculations.

**County Attainment Status**

The source is located in Vigo County.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO₂</td>
<td>Attainment effective July 8, 2019, for the 2010 SO₂ standard for Fayette and Harrison townships. Unclassifiable or attainment effective April 9, 2018, for the remainder of the county.</td>
</tr>
<tr>
<td>CO</td>
<td>Unclassifiable or attainment effective November 15, 1990.</td>
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<tr>
<td>O₃</td>
<td>Unclassifiable or attainment effective January 16, 2018, for the 2015 8-hour ozone standard.</td>
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<tr>
<td>PM₂.₅</td>
<td>Unclassifiable or attainment effective April 15, 2015, for the 2012 annual PM₂.₅ standard.</td>
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<td>PM₂.₅</td>
<td>Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour PM₂.₅ standard.</td>
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### Pollutant Designation

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<tr>
<td>NO&lt;sub&gt;2&lt;/sub&gt;</td>
<td>Unclassifiable or attainment effective January 29, 2012, for the 2010 NO&lt;sub&gt;2&lt;/sub&gt; standard.</td>
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<tr>
<td>Pb</td>
<td>Unclassifiable or attainment effective December 31, 2011, for the 2008 lead standard.</td>
</tr>
</tbody>
</table>

(a) **Ozone Standards**

Volatile organic compounds (VOC) and Nitrogen Oxides (NO<sub>x</sub>) 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 NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to ozone. Vigo County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) **PM<sub>2.5</sub>**

Vigo County has been classified as attainment for PM<sub>2.5</sub>. Therefore, direct PM<sub>2.5</sub>, SO<sub>2</sub>, and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) **SO<sub>2</sub>**

U.S. EPA, in the Federal Register Notice 78 FR 47191 dated August 5, 2013, designated Vigo County, Harrison Township as nonattainment for SO<sub>2</sub>. Therefore, SO<sub>2</sub> emissions were reviewed pursuant to the requirements of Emission Offset, 326 IAC 2-3.

(d) **Other Criteria Pollutants**

Vigo County 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.

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>
</tr>
</thead>
<tbody>
<tr>
<td>PM¹</td>
</tr>
<tr>
<td>135.59</td>
</tr>
</tbody>
</table>

Total PTE of Entire Source excluding Fugitive Emissions

<table>
<thead>
<tr>
<th></th>
<th>NA</th>
<th>100</th>
<th>100</th>
<th>100</th>
<th>100</th>
<th>100</th>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title V Major Source Thresholds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSD Major Source Thresholds</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</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
⁴Fugitive 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 PM₁₀, PM₂.₅, and SO₂ is equal to or greater than 100 tons per year. However, the Permittee has agreed to limit the source’s PM₁₀, PM₂.₅, and SO₂ emissions to less than Title V major source thresholds. Therefore, the source will be issued a FESOP Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(30)) of all other regulated air pollutants are less than 100 tons per year.

(c) 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) and not subject to the provisions of 326 IAC 2-7.

Description of Proposed Modification to an Existing Source

The Office of Air Quality (OAQ) has reviewed an application, submitted by Sony DADC on June 01, 2020, notifying IDEM that the source had constructed and operated three (3) new blast units, Blast 3, Blast 8, and Blast 4 under the jig cleaning process in 2005, 2008, and 2016 before receiving the proper approvals.

The following is a list of the unpermitted emission units and pollution control device(s):

(1) One (1) Jig Wash blast operation, with a totally enclosed dust collector, consisting of three (3) blast units, utilizing plastic beads and alumina as media at a maximum flow rate of 742.2 pounds of media per hour each, exhausting inside the building:

(a) One (1) aluminum/silicon blaster - chemical jigwash, Blast 3, installed in 2005 (permitted in 2020)
(b) Siz Blaster - Blast Room by Receiving, Blast 8, installed in 2016 (permitted in 2020)
(c) Media Blaster for Aluminum/Silicon Dust - Mold Maintenance, Blast 4, installed in 2008 (permitted in 2020)
Permit Level Determination – FESOP Renewal

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 2-8-11.1 (Permit Revisions). This table reflects the PTE before controls of the proposed revision. 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</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jig Wash Blast Operation (Blast's 3, 8, and 4)</td>
<td>97.53</td>
<td>97.53</td>
<td>97.53</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total PTE Before Controls of the New Emission Units:</td>
<td>97.53</td>
<td>97.53</td>
<td>97.53</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

1PM_{2.5} listed is direct PM_{2.5}.
2Single highest HAP.

Appendix A of this TSD reflects the detailed potential emissions of the renewal.

Pursuant to 326 IAC 2-8-11.1(f)(1)(E), this FESOP is being revised through a FESOP Significant Permit Revision because the proposed revision is not an Administrative Amendment or Minor Permit revision and the proposed revision involves the construction of new emission units with potential to emit equal to or greater than twenty-five (25) tons per year of the following pollutants:
(i) PM, PM_{10}, or direct PM_{2.5}.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any new control equipment is considered federally enforceable only after issuance of this FESOP 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>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>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PTE of Entire Source Excluding Fugitive Emissions</td>
<td>135.59</td>
<td>69.84</td>
<td>69.46</td>
<td>89.90</td>
<td>85.51</td>
<td>14.72</td>
<td>46.10</td>
<td>1.30</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>100</td>
<td>25</td>
</tr>
<tr>
<td>PSD Major Source Thresholds</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>NA</td>
</tr>
<tr>
<td>Emission Offset Major Source Thresholds</td>
<td>---</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
Appendix A of this TSD reflects the detailed potential to emit of the entire source after issuance.

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. See Technical Support Document (TSD) State Rule Applicability - Entire Source section, 326 IAC 2-8 (FESOP), 326 IAC 2-2 (PSD), and 326 IAC 2-3 (Emission Offset) for more information regarding the limit(s).

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2-2), because no PSD regulated pollutant is emitted at a rate of two hundred fifty (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 source is not a major source of HAP, as defined in 40 CFR 63.2, because HAP 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).

Federal Rule Applicability

Federal rule applicability for this source has been reviewed as follows:

New Source Performance Standards (NSPS):

(a) The requirements of the New Source Performance Standard for the Phosphate Fertilizer Industry, 40 CFR 60, Subpart T and 326 IAC 12, are not included in the permit for this source, because the source does not produce fertilizer or phosphoric acids.

(b) Emergency generator 010 is subject to the New Source Performance Standards for Stationary Compression Ignition Internal Combustion 40 CFR 60, Subpart III and 326 IAC 12, because it was constructed after 2004. The emergency generator 010 subject to this rule includes the following:

(4) Caterpillar Corp. diesel emergency, installed in 2007, identified as Unit 010, with a maximum capacity of 77 HP, firing #2 fuel only, using no control, and exhausting to stack 010. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

Emergency generator 010 is subject to the following portions of Subpart III:

(1) 40 CFR 60.4200
(2) 40 CFR 60.4202(a)(2)
(3) 40 CFR 60.4205(b)
(4) 40 CFR 60.4206
(5) 40 CFR 60.4207(a),(b),(c)
(6) 40 CFR 60.4209(a)
(7) 40 CFR 60.4211(a),(c), (e), (f)(1), (f)(2)(i), (f)(3)
(8) 40 CFR 60.4214(b)
(9) 40 CFR 60.4218
(10) 40 CFR 60.4219
(11) Table 8

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the emergency generator 010 except as otherwise specified in 40 CFR 60, Subpart III.

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:

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).

(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.

(b) The requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion 40 CFR 60, Subpart III and 326 IAC 12, are not included in the permit for all other emergency generators, because all of the generators were installed before the applicability date of July 11, 2005. All of the generators were installed between 1958 and 2004, except for unit 010 and are not considered fire pumps.

(c) The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units 40 CFR 60, Subpart Dc and 326 IAC 12, are not included in the permit for this source because the eleven (11) boiler units were either constructed before the applicability date of June 9, 1989, or have a maximum heat input capacity of less than 10 MMBtu per hour.

(d) The requirements of the New Source Performance Standard for Stationary Combustion Turbines 40 CFR 60, Subpart KKKK and 326 IAC 12, are not included in the permit for the boiler units, because they are not heat recovery units.

(e) The requirements of the New Source Performance Standard for the Graphic Arts Industry: Publication Rotogravure Printing 40 CFR 60, Subpart QQ and 326 IAC 12, are not included in the permit for the printing operations, because the source does not manufacture pressure sensitive labels.
(f) The requirements of the New Source Performance Standard for Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations, 40 CFR 60, Subpart RR and 326 IAC 12, are not included in the permit for the printing operations, because the source does not manufacture pressure sensitive labels.

(g) The requirements of the New Source Performance Standard for Flexible Vinyl and Urethane Coating and Printing, 40 CFR 60, Subpart FFF and 326 IAC 12, are not included in the permit for the printing operations, because the process at this source does not involve the rotogravure printing process.

(h) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

**National Emission Standards for Hazardous Air Pollutants (NESHAP):**

(a) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Miscellaneous Coating Manufacturing, 40 CFR 63, Subpart HHHHHH and 326 IAC 20-88 are not included in the permit for this source, since the source does not manufacture coatings.

(b) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, 40 CFR 63, Subpart HHHHHHH is not included in the permit for this source, since because the source does not perform paint stripping activities containing Methylene Chloride, does not perform spray application of coatings to motor vehicles or mobile equipment and does not perform spray application of coatings that contain chromium, lead, manganese, nickel, or cadmium to a plastic and/or metal substrate. The plating operations at this source apply nickel through a plating process and not a spray application.

(c) The emergency generators and fire pumps except for unit 010 at this source are subject to the requirements of 40 CFR Part 63, Subpart ZZZZ for Reciprocating Internal Combustion Engines because they are existing reciprocating internal combustion engines; therefore, the following requirements of 40 CFR Part 63, Subpart ZZZZ shall apply:

1. 40 CFR 63.6580
2. 40 CFR 63.6585
3. 40 CFR 63.6590(a)(1)(iii)
4. 40 CFR 63.6595(a)(1), (b), and (c)
5. 40 CFR 63.6603(a)
6. 40 CFR 63.6605
7. 40 CFR 63.6625(e)(3), (f), (h) and (i)
8. 40 CFR 63.6635
9. 40 CFR 63.6640(a), (b), (e), (f)(1), (f)(2)(i), and (f)(4)
10. 40 CFR 63.6645(a)(5)
11. 40 CFR 63.6650
12. 40 CFR 63.6655(a), (d), (e), and (f)
13. 40 CFR 63.6660
14. 40 CFR 63.6665
15. 40 CFR 63.6670
16. 40 CFR 63.6675
17. Table 2d (item 4)
18. Table 5 (item 9)
19. Table 8

Note: Existing emergency compression ignition (CI) stationary RICE located at an area source of HAP are not subject to numerical CO or formaldehyde emission limitations, but are only subject to work and management practices under Table 2d and Table 6.
The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the source except as otherwise specified in 40 CFR 63, Subpart ZZZZ.

Based on the existing permit, 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)(ii) and (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: https://www.epa.gov/sites/production/files/2016-06/documents/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 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

(d) The diesel generator, ID unit 010, 77HP is subject the requirements of the 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (326 IAC 20-82), because it is considered a new (construction commenced on or after June 12, 2006) stationary reciprocating internal combustion engine (RICE) at an area source of hazardous air pollutants (HAP). Construction of the diesel generator, ID unit 010 commenced in 2007.

The diesel generator, ID unit 010 is subject the following applicable portions of the NESHAP for new stationary RICE at an area source of HAP:

(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)(6)
Pursuant to 40 CFR 63.6665, the diesel generator, ID unit 010 not have to meet the requirements of 40 CFR 63, Subpart A (General Provisions), since it is considered a new stationary RICE located at an area source of HAP emissions.

(e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDDD and 326 IAC 20-95 are not included in the permit for the combustion boiler units, 003, 004, 014, 015, 016, 017, 018, 019, and 020, since the source is not a major source of HAP.

(f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for the Printing and Publishing Industry, 40 CFR 63, Subpart KK and 326 IAC 20-18 are not included in the permit for the printing operations, since the source is not a major source of HAP.

(g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Paper and Other Web Coating, 40 CFR 63, Subpart JJJJ and 326 IAC 20-65 are not included in the permit for the printing operations, since the source is not a major source of HAP.

(h) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Plastic Parts and Products, 40 CFR 63, Subpart PPPPP and 326 IAC 20-81 are not included in the permit for the printing operations, since the source is not a major source of HAP.

(i) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJJJ is not included in the permit for the eleven (11) boilers, since each boiler meets the definition of a gas fired boiler as defined in 40 CFR 63.11237. Pursuant to 40 CFR 63.11195(e), a gas-fired boiler as defined in this subpart is not subject to any requirements of this subpart.

(j) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Plating and Polishing Operations, 40 CFR 63, Subpart WWWWIIIW is included in the permit for the nickel plating operations, since it is an area source of HAPs and performs plating operation as specified in the criteria of the rule. The nickel plating operation is subject to the following applicable sections of the rule:

(1) 40 CFR 63.11504(a)(1)(i) and (ii)
(2) 40 CFR 63.11504(a)(2) and (a)(3)
(3) 40 CFR 63.11050(a)(1)
(4) 40 CFR 63.11505(b)
(5) 40 CFR 63.11505(e)
(6) 40 CFR 63.11506(a)
(7) 40 CFR 63.11507(a)
(8) 40 CFR 63.11507(g)
(9) 40 CFR 63.11508(a)
(10) 40 CFR 63.11508(b)
(11) 40 CFR 63.11508(c)(1) through (4)
(12) 40 CFR 63.11508(d)(1) through (4)
(13) 40 CFR 63.11508(d)(5) through (8)
(14) 40 CFR 63.11509(a)(1) through (3)
(15) 40 CFR 63.11509(b) through (f)
(16) 40 CFR 63.11510
(17) 40 CFR 63.11511
(18) 40 CFR 63.11512
The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the source except as otherwise specified in 40 CFR 63, Subpart WWWW.

(k) 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 not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

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.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The provisions of 326 IAC 2-4.1 apply to any owner or operator who constructs or reconstructs a major source of hazardous air pollutants (HAP), as defined in 40 CFR 63.41, after July 27, 1997, unless the major source has been specifically regulated under or exempted from regulation under a NESHAP that was issued pursuant to Section 112(d), 112(h), or 112(j) of the Clean Air Act (CAA) and incorporated under 40 CFR 63. On and after June 29, 1998, 326 IAC 2-4.1 is intended to implement the requirements of Section 112(g)(2)(B) of the Clean Air Act (CAA).

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 not subject to 326 IAC 2-6 (Emission Reporting), because it is not required to have an operating permit pursuant to 326 IAC 2-7 (Part 70); it is not located in Lake, Porter, Clark, or Floyd County, and its potential to emit lead is less than 5 tons per year. Therefore, this rule does not apply.

326 IAC 2-8-4 (FESOP) and 326 IAC 20 (Hazardous Air Pollutants)
FESOP applicability is discussed under the Potential to Emit After Issuance section of this document.

FESOP PM10, PM2.5, and SO2 Limit(s)

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-7 (Part 70 Permits), not applicable, the Permittee shall comply with the following:

(a) The usage of No. 2 fuel oil in the boilers (Units 1, 2, 3, 4, and 18) shall be limited to 2,467,500 U.S. gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The SO2 emissions from the boilers (Units 1, 2, 3, 4, and 18) shall not exceed 0.071 pounds SO2 per gallon of No. 2 Fuel Oil used.

(c) The PM10 emissions after the dust collector from the Jig Blast Wash Operation shall not exceed 13.36 lbs/hr.

(d) The PM2.5 emissions after the dust collector from the Jig Blast Wash Operation shall not exceed 13.36 lbs/hr.
Compliance with these limits, combined with all other PM10, PM2.5, and SO2 emissions at this source, shall limit the source-wide potential to emit PM10, PM2.5, and SO2 to less than 100 tons per twelve (12) consecutive month period, each and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) not applicable.

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)
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)
This source (located in Vigo County) is located in one of the counties listed in 326 IAC 6.5, but is not one of the sources specifically listed in 326 IAC 6.5-2 through 326 IAC 6.5-10. The source-wide PTE of PM is 10 tons per year or more. Therefore, this source is subject to the requirements of 326 IAC 6.5-1-2 because the source-wide actual emissions of PM can be 10 tons per year or more.

326 IAC 6.8 (Particulate Matter Limitations for Lake County)
Pursuant to 326 IAC 6.8-1-1(a), this source (located in Vigo County) is not subject to the requirements of 326 IAC 6.8 because it is not located in Lake County.

State Rule Applicability – Individual Facilities
State rule applicability has been reviewed as follows:

Silk Screening and Offset Printing

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Even though, these units were constructed after January 1, 1980, they are not subject to the requirements of 326 IAC 8-1-6 because their unlimited VOC potential emissions are less than twenty-five (25) tons per year.

Abrasive Blast Operations (Blasts, 3, 5, 7, 6, 8, 4)

326 IAC 6.5 (PM Limitations Except Lake County)
Pursuant to 326 IAC 6.5-1-2(a), the particulate matter emissions from the Abrasive Blasting Operations (Blast’s 3, 5, 7, 6, 8, 4) shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf). The internal dust collection systems, with a minimum control efficiency of 90%, is capable of complying with this limit, and shall be in operation at all times the blast units are in operation, and in accordance with manufacturer’s specifications, in order to comply with this limit.
Boilers

326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-1(e) the boilers are not subject to the provision of 326 IAC 6-2-4, since the boilers are subject to a more stringent particulate matter emission limit under 326 IAC 6.5.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 1-2-59, the requirements of 326 IAC 6-3-2 are not applicable to the natural gas fired emergency generator, since liquid and gaseous fuels and combustion air are not considered as part of the process weight.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
Pursuant to 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County), the Permittee shall comply with the following:

1. Particulate emissions from the boiler units when using No. 2 fuel oil shall not exceed twenty-seven hundredths (0.27) grams per million kcal (fifteen-hundredths (0.15) pound per million Btu.

2. Particulate emissions from the boiler units when using natural gas shall not exceed one hundredth (0.01) per dry standard cubic foot (dscf).

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations
Pursuant to 326 IAC 7-.1.1-1, the natural gas-fired boilers identified as EU 001, 002, 003, 004, and 018 are not subject to the requirements of 326 IAC 7-1.1 because each boiler does not have the potential to emit twenty-five (25) tons per year or ten (10) pounds per hour of sulfur dioxide.

326 IAC 7-4-3.1 (Vigo County sulfur dioxide emission limitations)
Pursuant to 326 IAC 7-4-3.1, the natural gas-fired boilers with No. 2 fuel oil as a backup fuel, identified as, Unit 001, 002, 003, 004, and 018 are subject to the limits in 326 IAC 326 IAC 7-4-3.1(a)(3) and shall not exceed five tenths (0.5) pounds per million Btu heat input, each.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Even though, these boilers were constructed after January 1, 1980, they are not subject to the requirements of 326 IAC 8-1-6 because their unlimited VOC potential emissions are less than twenty-five (25) tons per year.

326 IAC 9-1 (Carbon Monoxide Emission Limits)
The requirements of 326 IAC 9-1 do not apply to the these units, 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.

Generators

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(3), the generators are not subject to the requirements of 326 IAC 6-3, since they combust liquid or gaseous fuels.

326 IAC 6.5 PM Limitations Except Lake County
Pursuant to 326 IAC 6.5-1-2(a), the particulate emissions from each emergency generator shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations
These emission units are not subject to 326 IAC 326 IAC 7-1.1 because they have a 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)
Even though, these generators were constructed after January 1, 1980, they are not subject to the requirements of 326 IAC 8-1-6 because their unlimited VOC potential emissions are less than twenty-five (25) tons per year.

326 IAC 9-1 (Carbon Monoxide Emission Limits)
The requirements of 326 IAC 9-1 do not apply to the these units, 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.

Emergency Fire Pumps

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(c), the emergency fire pumps are not subject to the requirements of 326 IAC 6-3, since they are subject to 6.5-1-2(a) limit.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), the Permittee shall comply with the following:

(1) Particulate emissions from the stationary fire pump shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations
This emission unit is not subject to 326 IAC 326 IAC 7-1.1 because it has a 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)
Even though, these boilers were constructed after January 1, 1980, they are not subject to the requirements of 326 IAC 8-1-6 because their unlimited VOC potential emissions are less than twenty-five (25) tons per year.

326 IAC 9-1 (Carbon Monoxide Emission Limits)
The requirements of 326 IAC 9-1 do not apply to the these units, 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.

Graphite Coating Operations - PM & VOC

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b), the graphite coating operations are not subject to the requirements of 326 IAC 6-3, since they are subject to a more stringent rule in 6.5.

326 IAC 6.5 PM Limitations Except Lake County
Pursuant to 326 IAC 6.5-1-2(h) (Particulate Emissions Limitations), surface coating, reinforced plastic composites fabricating manufacturing processes, and graphic arts manufacturing processes shall be controlled by a dry particulate filter, waterwash, or an equivalent control device.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Even though, these boilers were constructed after January 1, 1980, they are not subject to the requirements of 326 IAC 8-1-6 because their unlimited VOC potential emissions are less than twenty-five (25) tons per year.

326 IAC 8-2-9 (Miscellaneous Metal and Plastic Parts Coating Operations)
Pursuant to 326 IAC 8-2-1(a) the graphite coating operations are not subject to the requirements of 326 IAC 8-2-9 because it does not perform surface coating and its potential emission are not 25 tons or greater per year.
Misc. VOC Operations

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Even though, these misc. VOC operations were constructed after January 1, 1980, they are not subject to the requirements of 326 IAC 8-1-6 because their unlimited VOC potential emissions are less than twenty-five (25) tons per year.

Shredders

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b), the shredders are not subject to the requirements of 326 IAC 6-3, since they are subject to a more stringent rule in 6.5.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), the Permittee shall comply with the following:

(1) Particulate matter emissions from each plastic scrap shredder shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-8 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 2-8-4. 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:

(1) IDEM OAQ has determined that testing of the boilers, Units 1, 2, 3, 4, and 18 are not required at this time to determine compliance with the SO2 emission limits. IDEM has the authority to require testing at a later time if necessary to demonstrate compliance with any applicable requirement.

(2) IDEM OAQ has determined that testing of the abrasive Blasting Operations, 3, 5, 7, 6, 8, 4 are not required at this time to determine compliance with the PM, PM10, and/or PM2.5 emission limits. IDEM has the authority to require testing at a later time if necessary to demonstrate compliance with any applicable requirement.
(b) The Compliance Monitoring Requirements applicable to this source are as follows:

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Type of Parametric Monitoring</th>
<th>Frequency</th>
<th>Range or Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boilers 1, 2, 3, 004, and 18</td>
<td>Visible Emissions Notation when using No.2 fuel only</td>
<td>Once per day</td>
<td>Normal/Abnormal</td>
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<tr>
<td>Abrasive Blasting Operations 3, 5, 7, 6, 8, 4</td>
<td>Inspections</td>
<td>Quarterly</td>
<td>normal/abnormal</td>
</tr>
</tbody>
</table>

These monitoring conditions are necessary because the boilers, 1, 2, 3, 4, and 18 must operate properly to assure compliance with 326 IAC 2-8-4 and the abrasive blasting operations, 3, 5, 7, 6, 8, and 4 with 326 IAC 2-8-4 and 326 IAC 6.5-1-2(a)

**Proposed Changes**

As part of this permit approval, the permit may contain new or different permit conditions and some conditions from previously issued permits/approvals may have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes.

The following changes were made to conditions contained previously issued permits/approvals (these changes may include Title I changes):

1. Removal of thirteen (13) offset printers from A.3(a).
2. Addition of three (3) blasting units to the jig wash and one (1) blasting unit to mold maintenance from A.3(b)(2).
3. Removal of one (1) dry ice blast operation from A.3(b)(3).
4. Removal of three (3) boilers from A.3(c).
5. Removal of one (1) plastic scrap shredder from A.3(e).
6. Removal of four (4) emergency generators from A.4(k).
7. Replacement of (2) emergency generators:

   This unit was removed:

   (1) Onan Cummins diesel emergency generator, installed in 1983, identified as Unit 007, with a maximum capacity of 115 BHP, firing #2 fuel only, using no control, and exhausting to stack 007. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

   The above unit was replaced with the following unit:

   (1) Onan Cummins diesel emergency generator, installed in 1991, identified as Unit 007, with a maximum capacity of 166 HP, firing #2 fuel only, using no control, and exhausting to stack 007. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

   This unit was removed:

   (2) Caterpillar Corp. diesel emergency, installed in 1986, identified as Unit 010, with a maximum capacity of 200 BHP, firing #2 fuel only, using no control, and exhausting to
stack 010. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

The above unit was replaced with the following unit:

(2) Caterpillar Corp. diesel emergency generator, installed in 2007, identified as Unit 010, with a maximum capacity of 77 HP, firing #2 fuel only, using no control, and exhausting to stack 010. This generator is a compression ignition reciprocating internal combustion engine, and is not considered a fire pump.

(8) Addition of six (6) tanks in A.4(m)(1-3).

(9) Removal of A.4(m)(9):

(9) One (1) Photoresist Coater, consisting of two process: - look in calcs and remove it

(A) Photoresist of Mastering process, containing no VOC materials.

(B) Photoresist Screening process, containing no VOC materials.

(10) One (1) photoresist coater, consisting of two processes that are still on site, but no longer used in from A.4(m)(4).

(11) Removal of all nickel plating (CD/DVD electroplating baths) and one (1) NED electroless plating baths operation from A.4(m)(5).

(12) Several descriptive changes.

### 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 June 1, 2020. Additional information was received on July 10, 2020.

The construction of this proposed revision shall be subject to the conditions of the attached proposed New Source Review and FESOP Renewal No. 167-42914-00032.

The staff recommends to the Commissioner that the FESOP Renewal be approved.

### IDEM Contact

(a) If you have any questions regarding this permit, please contact Andrea C. Smith, 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) 234-6543 or (800) 451-6027, and ask for Andrea C. Smith or (317) 234-6543.

(b) A copy of the findings is available on the Internet at: [http://www.in.gov/ai/appfiles/idem-caats/](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](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](http://www.in.gov/idem/6900.htm).
### Emissions Summary - Entire Source

#### Unlimited/Uncontrolled Potential to Emit

<table>
<thead>
<tr>
<th>Emissions Units</th>
<th>Description</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
<th>Worst Case HAP</th>
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#### Limited/Controlled Emissions

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<th>PM2.5</th>
<th>SO2*</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
<th>Worst Case HAP</th>
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<td>Printing Operations</td>
<td>Silk Screening</td>
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<tr>
<td>Jig Wash Blast Operation</td>
<td>Blast 3, 4, and 8</td>
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<td>Boilers and Generators</td>
<td>EU001.002.003.004.018 - Natural Gas Boilers w/ No. 2 Fuel backup alternate fuel</td>
<td>0.40</td>
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<td>21.05</td>
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<td>EU003.015.016.017 - Natural Gas Boilers - no backup fuel</td>
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<td>EU009.020 - Natural Gas Boilers - Low Nix Burners</td>
<td>0.13</td>
<td>0.52</td>
<td>0.52</td>
<td>0.04</td>
<td>3.43</td>
<td>0.38</td>
<td>5.77</td>
<td>1.30E-02</td>
<td>1.30E-02</td>
</tr>
<tr>
<td></td>
<td>EU007.009.010 - Emergency Generators Output less than 600 HP</td>
<td>0.31</td>
<td>0.30</td>
<td>0.30</td>
<td>0.28</td>
<td>4.20</td>
<td>0.35</td>
<td>0.22</td>
<td>3.76E-10</td>
<td>9.33E-04</td>
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<tr>
<td></td>
<td>EU013.021 - Emergency Generators Output greater than 600 HP</td>
<td>0.26</td>
<td>0.15</td>
<td>0.15</td>
<td>1.52</td>
<td>9.02</td>
<td>0.27</td>
<td>2.07</td>
<td>5.58E-04</td>
<td>7.43E-04</td>
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<tr>
<td></td>
<td>Electroplating Operations</td>
<td>0.06</td>
<td>0.48</td>
<td>0.26</td>
<td>0.26</td>
<td>1.18</td>
<td>0.00</td>
<td>0.00</td>
<td>3.25E-03</td>
<td>3.25E-03</td>
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<tr>
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<td>Plasma Cleaning Operations</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>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td></td>
<td>Graphite Jig Coating Operations</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</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></td>
<td>Misc. VOC Operations</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></td>
<td>Shredders</td>
<td>0.71</td>
<td>0.40</td>
<td>0.40</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><strong>Totals Controlled/Limited Emissions</strong></td>
<td></td>
<td>135.59</td>
<td>69.64</td>
<td>69.64</td>
<td>89.90</td>
<td>85.51</td>
<td>14.72</td>
<td>46.10</td>
<td>1.30</td>
<td>0.50</td>
</tr>
</tbody>
</table>

#### Notes:
- PM not limited because well under threshold limits.
- *No. 2 Fuel Oil emission limits based on source’s request to limit No. 2 Fuel Oil usage to 2,467,500 gallons per twelve (12) consecutive month period. Please see TSD for more information.*
### Appendix A: Emission Calculations

**Modification Summary**

**Company Name:** Sony DADC  
**Address City IN Zip:** 1800 N. Fruitàbridge Ave. Terre Haute, IN 47804  
**Permit Number:** 167-42914-00032  
**Reviewer:** Andrea C. Smith

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5 *</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generator 007</td>
<td>9.13E-02</td>
<td>9.13E-02</td>
<td>9.13E-02</td>
<td>8.51E-02</td>
<td>1.29</td>
<td>0.10</td>
<td>0.28</td>
<td>1.13E-03</td>
</tr>
<tr>
<td>Generator 010</td>
<td>4.24E-02</td>
<td>4.24E-02</td>
<td>4.24E-02</td>
<td>3.95E-02</td>
<td>0.60</td>
<td>4.84E-02</td>
<td>0.13</td>
<td>5.22E-04</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>0.12</td>
<td>1.88</td>
<td>0.15</td>
<td>0.41</td>
<td>1.65E-03</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5 *</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jig Wash Blast Operation (Blast 3, 4, and 8)</td>
<td>97.53</td>
<td>97.53</td>
<td>97.53</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Appendix A: Emissions Calculations
Electroplating Operations

Company Name: Sony DADC
Address City IN Zip: 1800 N. Fruitridge Ave. Terre Haute, IN 47804
Permit Number: 167-42914-00032
Plt ID: 167-00032
Reviewer: Andrea C. Smith

Nickel Electroplating

New Calculation

<table>
<thead>
<tr>
<th>Max Capacity</th>
<th>Emission Factor</th>
<th>Emission factor</th>
<th>A hr/unit</th>
<th>Nickel Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>units/yr</td>
<td>grains/A-hr</td>
<td>lb/A-hr</td>
<td>lb/yr</td>
</tr>
<tr>
<td>Max Stampers Qty</td>
<td>186,912</td>
<td>0.63</td>
<td>0.00009</td>
<td>55.40</td>
</tr>
<tr>
<td>Typical Stampers Qty</td>
<td>11,941</td>
<td>0.63</td>
<td>0.00009</td>
<td>55.40</td>
</tr>
</tbody>
</table>

Methodology:
- Emission factor from Table 12.20-4 of AP-42 Chapter 12.20 (SCC 3-09-010-68)
- Emissions lb/hr = grams per hour x conversion factor
- Emissions tons per year = lb/hr x 24 hours/day x 365 days per yr / 2000 lbs/ton

Nickel Electroplating Calculations:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>21 Stamper Baths.</td>
<td></td>
</tr>
<tr>
<td>12 Stamper Baths. not in use.</td>
<td></td>
</tr>
<tr>
<td>1.5 Hour per stamper.</td>
<td></td>
</tr>
<tr>
<td>24 Max hours per day.</td>
<td></td>
</tr>
<tr>
<td>16 Max Stampers per day per bath.</td>
<td></td>
</tr>
<tr>
<td>528 Max stampers per day.</td>
<td></td>
</tr>
<tr>
<td>354 Max working days per year.</td>
<td>(Typical days per year is &lt; or = 256.)</td>
</tr>
<tr>
<td>186912 Max stampers per year.</td>
<td></td>
</tr>
</tbody>
</table>

Note: April 2019 - April 2020 11,941 stampers produced total. This is typical actual.
## Appendix A: Emissions Calculations
### Printing Operations

**Company Name:** Sony DADC  
**Address City IN Zip:** 1800 N. Fruitridge Ave. Terre Haute, IN 47804  
**Permit Number:** 167-42914-00032  
**Reviewer:** Andrea C. Smith

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Position</th>
<th>Max throughput units/minute</th>
<th>Ink Usage gr/unit</th>
<th>VOC content of ink</th>
<th>VOC emissions gr/hr</th>
<th>VOC Emissions lb/hr</th>
<th>lb/day</th>
<th>ton/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empty</td>
<td>1</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Kammann Screen</td>
<td>2</td>
<td>75</td>
<td>0.18</td>
<td>0.07</td>
<td>56.7</td>
<td>0.125</td>
<td>3.00</td>
<td>0.548</td>
</tr>
<tr>
<td>Kammann Screen</td>
<td>3</td>
<td>75</td>
<td>0.18</td>
<td>0.07</td>
<td>56.7</td>
<td>0.125</td>
<td>3.00</td>
<td>0.548</td>
</tr>
<tr>
<td>Kammann Screen</td>
<td>4</td>
<td>75</td>
<td>0.18</td>
<td>0.07</td>
<td>56.7</td>
<td>0.125</td>
<td>3.00</td>
<td>0.548</td>
</tr>
<tr>
<td>Screen Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.543</td>
</tr>
<tr>
<td>Kammann Offset</td>
<td>6</td>
<td>135</td>
<td>0.18</td>
<td>0.03</td>
<td>43.74</td>
<td>0.096</td>
<td>2.314</td>
<td>0.422</td>
</tr>
<tr>
<td>Kammann Offset</td>
<td>9</td>
<td>135</td>
<td>0.18</td>
<td>0.03</td>
<td>43.74</td>
<td>0.096</td>
<td>2.314</td>
<td>0.422</td>
</tr>
<tr>
<td>Kammann Offset</td>
<td>19</td>
<td>135</td>
<td>0.18</td>
<td>0.03</td>
<td>43.74</td>
<td>0.096</td>
<td>2.314</td>
<td>0.422</td>
</tr>
<tr>
<td>Kammann Offset</td>
<td>20</td>
<td>135</td>
<td>0.18</td>
<td>0.03</td>
<td>43.74</td>
<td>0.096</td>
<td>2.314</td>
<td>0.422</td>
</tr>
<tr>
<td>Kammann Offset</td>
<td>21</td>
<td>135</td>
<td>0.18</td>
<td>0.03</td>
<td>43.74</td>
<td>0.096</td>
<td>2.314</td>
<td>0.422</td>
</tr>
<tr>
<td>Kammann Offset</td>
<td>22</td>
<td>135</td>
<td>0.18</td>
<td>0.03</td>
<td>43.74</td>
<td>0.096</td>
<td>2.314</td>
<td>0.422</td>
</tr>
<tr>
<td>Kammann Offset</td>
<td>23</td>
<td>135</td>
<td>0.18</td>
<td>0.03</td>
<td>43.74</td>
<td>0.096</td>
<td>2.314</td>
<td>0.422</td>
</tr>
<tr>
<td>Kammann Offset</td>
<td>24</td>
<td>135</td>
<td>0.18</td>
<td>0.03</td>
<td>43.74</td>
<td>0.096</td>
<td>2.314</td>
<td>0.422</td>
</tr>
<tr>
<td>Kammann Offset</td>
<td>25</td>
<td>135</td>
<td>0.18</td>
<td>0.03</td>
<td>43.74</td>
<td>0.096</td>
<td>2.314</td>
<td>0.422</td>
</tr>
<tr>
<td>Kammann Offset</td>
<td>26</td>
<td>135</td>
<td>0.18</td>
<td>0.03</td>
<td>43.74</td>
<td>0.096</td>
<td>2.314</td>
<td>0.422</td>
</tr>
<tr>
<td>Kammann Offset</td>
<td>27</td>
<td>135</td>
<td>0.18</td>
<td>0.03</td>
<td>43.74</td>
<td>0.096</td>
<td>2.314</td>
<td>0.422</td>
</tr>
<tr>
<td>Kammann Offset</td>
<td>28</td>
<td>135</td>
<td>0.18</td>
<td>0.03</td>
<td>43.74</td>
<td>0.096</td>
<td>2.314</td>
<td>0.422</td>
</tr>
<tr>
<td>Kammann Offset</td>
<td>29</td>
<td>135</td>
<td>0.18</td>
<td>0.03</td>
<td>43.74</td>
<td>0.096</td>
<td>2.314</td>
<td>0.422</td>
</tr>
<tr>
<td>Kammann Offset</td>
<td>30</td>
<td>135</td>
<td>0.18</td>
<td>0.03</td>
<td>43.74</td>
<td>0.096</td>
<td>2.314</td>
<td>0.422</td>
</tr>
<tr>
<td>Kammann Offset</td>
<td>31</td>
<td>135</td>
<td>0.18</td>
<td>0.03</td>
<td>43.74</td>
<td>0.096</td>
<td>2.314</td>
<td>0.422</td>
</tr>
<tr>
<td>Kammann Offset</td>
<td>32</td>
<td>135</td>
<td>0.18</td>
<td>0.03</td>
<td>43.74</td>
<td>0.096</td>
<td>2.314</td>
<td>0.422</td>
</tr>
<tr>
<td>Kammann Offset</td>
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<td>90</td>
<td>0.18</td>
<td>0.03</td>
<td>29.16</td>
<td>0.064</td>
<td>1.543</td>
<td>0.282</td>
</tr>
<tr>
<td>Kammann Offset</td>
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<td>135</td>
<td>0.18</td>
<td>0.03</td>
<td>43.74</td>
<td>0.096</td>
<td>2.314</td>
<td>0.422</td>
</tr>
<tr>
<td>Offset Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.462</td>
</tr>
<tr>
<td>Grand Total</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.104</td>
</tr>
</tbody>
</table>

### Methodology:
- VOC emissions grams per hour = Maximum throughput/minute x ink usage grams/unit x VOC content.
- Emissions lb/hr = grams per hour x conversion factor
- Emissions tons per year = lb/hr x 24 hours/day x 365 days per yr / 2000 lbs/ton

### NOTES:
- VOC content of ink is based on worst case scenario, using highest VOC-content ink used by source.
- Silk Screen printers are considered one printing operation, since CDs and DVDs can be printed on any of the silk screen printers.
- Offset printers are considered one printing operation, since CDs and DVDs can be printed on any of the offset printers.
Appendix A: Emissions Calculations

Plastic Scrap Shredders

Company Name: Sony DADC
Address City IN Zip: 1800 N. Fruitridge Ave. Terre Haute, IN 47804
Permit Number: 167-42914-00032
Reviewer: Andrea C. Smith

| Maximum Printing Operation Throughput (lb/hr) | 3,681.72 |
| Percent Scrap (%) | 25.0% |
| Potential Scrap Throughput (lb/hr) | 920.43 |
| Potential Scrap Throughput (tons/year) | 4,031.48 |

Potential to Emit (PTE) PM/PM$_{10}$/PM$_{2.5}$ and VOC

<table>
<thead>
<tr>
<th>Equipment Name</th>
<th>Pollutant</th>
<th>Emission Factor (lb/ton)</th>
<th>Potential to Emit (lb/hr)</th>
<th>Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>One (1) Plastic Scrap Shredders (total of all shredding)</td>
<td>PM</td>
<td>0.35</td>
<td>0.16</td>
<td>0.71</td>
</tr>
<tr>
<td></td>
<td>PM$_{10}$</td>
<td>0.20</td>
<td>0.09</td>
<td>0.40</td>
</tr>
<tr>
<td>*</td>
<td>*PM$_{2.5}$</td>
<td>0.20</td>
<td>0.09</td>
<td>0.40</td>
</tr>
</tbody>
</table>

* Assume PM$_{2.5}$ emissions equal to PM$_{10}$.

Notes:
The maximum throughput has been assumed to equal the maximum printing throughput (225,120 units/hr), using the maximum weight of a CD/DVD disc (0.58 ounces).
The disc weight was obtained at the following link: http://www.elivermore.com/mailing_dvds.htm#Weight_Summary
The disc weights were taken from production samples. All measured discs were less than 16 grams. Weight per disc was rounded up to 16 grams.
There are no AP-42 Emission Factors for grinding of plastic. As a conservative estimate, IDEM has estimated emissions for plastic grinding using log sawing.
The emission factors are from AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants EPA March 1990 for Sawmill Operations (Log Sawing: General) (SCC 3-07-008-01, 3-07-008-02, and 3-07-008-03).

Methodology:
Maximum Printing Throughput (lb/hr) = Printing Throughput (units/hr) * 0.58 oz/unit + 16 oz/lb
Scrap Throughput (lb/hr) = Maximum Printing Throughput (lb/hr) * Percent Scrap (%)
Scrap Throughput (tons/yr) = Scrap Throughput (lb/hr) * 8760 hr/yr + 2000 lb/ton
Particulate Potential to Emit (lb/hr) = Throughput (tons/yr) * Emission Factor (lb/ton) + 2000 lb/ton
Particulate Potential to Emit (tons/yr) = Potential to Emit (lb/hr) * 8760 hr/yr + 2000 lb/ton
Combined maximum throughput capacity of Printed units per hour. 104,375 grams each 16
lbs each 0.04 Total lb/hr 3682
### Appendix A: Emissions Calculations

#### Misc VOC Operations

**Company Name:** Sony DADC  
**Address City IN Zip:** 1800 N. Fruitridge Ave. Terre Haute, IN 47804  
**Permit Number:** 167-42914-00032  
**Reviewer:** Andrea C. Smith

#### VOC Emitting Units

<table>
<thead>
<tr>
<th>Use</th>
<th>Material</th>
<th>Density lb/gal</th>
<th>VOC content</th>
<th>Max usage gal/yr</th>
<th>VOC emissions lbs/yr</th>
<th>VOC emissions tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jig Washing</td>
<td>IPA dip tanks (2)</td>
<td>6.6</td>
<td>100%</td>
<td>156</td>
<td>1029.6</td>
<td>0.51</td>
</tr>
<tr>
<td>Offset Plate Making - Cleaning</td>
<td>IPA</td>
<td>6.6</td>
<td>100%</td>
<td>156</td>
<td>1029.6</td>
<td>0.51</td>
</tr>
<tr>
<td>Graphite coating part cleaner</td>
<td>naphtha-graphite coating</td>
<td>6.314</td>
<td>100%</td>
<td>156</td>
<td>985</td>
<td>0.49</td>
</tr>
</tbody>
</table>

**Methodology:**

VOC Emissions lb/yr = Density lbs/gal x VOC content % x Max usage gal/yr  
VOC Emissions tons/yr - VOC emissions lb/yr / 2000 lbs/ton

Total 1.52

#### Processes with VOC potential - but negligible (less than 3 lb/hr and 15 lb/day)

- Ink Jet Printing in Screen Making

#### Other cleaning processes where non-VOC containing materials are used:

- Stamper Washer Cleaner  
- Jig Washing  
- Mastering  
- Cleaning throughout the plant  
- Screen Printing  

**Process**  
**Material**
- Stamper Washer Cleaner  
P3  
- Jig Washing  
various acids  
- Mastering  
CD-30 Developer  
- Cleaning throughout the plant  
Acetone based solvent  
- Screen Printing  
Photo Resist
### Material Density and Emissions Calculations

**Company Name:** Sony DADC  
**Address City IN Zip:** 1800 N. Fruitridge Ave. Terre Haute, IN 47804  
**Permit Number:** 167-42914-00032  
**Reviewer:** Andrea C. Smith

| Material | Density (Lb/Gal) | Weight % Volatile (H2O & Organics) | Weight % Water | Weight % Organics | Volume % Water | Volume % Non-Volatiles (solids) | Gal of Mat. (gal/unit) | Maximum (unit/hour) | Pounds VOC per gallon of coating less water | Pounds VOC per gallon of coating | Potential VOC pounds per hour | Potential VOC pounds per day | Potential VOC Tons per Year | Particulate Potential (ton/yr) | lb VOC/gal solids | Transfer Efficiency |
|----------|------------------|-----------------------------------|----------------|------------------|---------------|-----------------|-----------------------------|-----------------|-----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|----------------|-------------------|
| Molykote | 8.1              | 95.00%                            | 0.0%           | 95.0%            | 0.0%          | 5.00%           | 0.00309                    | 2.083           | 7.70                        | 7.70                      | 0.05                        | 1.19                        | 0.22                        | 0.010                       | 153.90                     | 15%              |

**METHODOLOGY**

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)

Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1-Weight % Volatiles) * (1-Transfer efficiency) * (8760 hrs/yr) * (1 ton/2000 lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Appendix A: Emissions Calculations
VOC and Particulate
Graphite Jig Coating Operation

Company Name: Sony DADC
Address City IN Zip: 1800 N. Fruitridge Ave. Terre Haute, IN 47804
Permit Number: 167-42914-00032
Reviewer: Andrea C. Smith

<table>
<thead>
<tr>
<th>Material</th>
<th>Density (Lb/Gal)</th>
<th>Weight % Volatile (H20 &amp; Organics)</th>
<th>Weight % Water</th>
<th>Weight % Organics</th>
<th>Volume % Water</th>
<th>Volume % Non-Volatiles (solids)</th>
<th>Gal of Mat. (gal/unit)</th>
<th>Maximum (unit/hour)</th>
<th>Pounds VOC per gallon of coating less water</th>
<th>Pounds VOC per gallon of coating</th>
<th>Potential VOC pounds per hour</th>
<th>Potential VOC pounds per day</th>
<th>Potential VOC tons per year</th>
<th>Particulate Potential (ton/yr)</th>
<th>lb VOC/gal solids</th>
<th>Transfer Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molykote</td>
<td>8.1</td>
<td>95.00%</td>
<td>0.0%</td>
<td>95.0%</td>
<td>0.0%</td>
<td>5.00%</td>
<td>0.00309</td>
<td>1.667</td>
<td>7.70</td>
<td>7.70</td>
<td>0.04</td>
<td>0.95</td>
<td>0.17</td>
<td>0.008</td>
<td>153.90</td>
<td>15%</td>
</tr>
</tbody>
</table>

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hrs/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1-Weight % Volatiles) * (1-Transfer efficiency) * (8760 hrs/yr) * (1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Appendix A: Emission Calculations

New Blasters

Company Name: Sony DADC
Address: 1800 N. Fruitridge Ave. Terre Haute, IN 47884
Permit Number: 167-42914-00032
Reviewer: Andrea C. Smith

Description - Location

Table 1 - Emission Factors for Abrasives

<table>
<thead>
<tr>
<th>Abrasive</th>
<th>PM/PM10/PM2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand</td>
<td>0.041</td>
</tr>
<tr>
<td>Steel Shot</td>
<td>0.010</td>
</tr>
<tr>
<td>Plastic Bead</td>
<td>0.010</td>
</tr>
</tbody>
</table>

Table 2 - Density of Abrasives (lb/ft³)

<table>
<thead>
<tr>
<th>Abrasive</th>
<th>Density (lb/ft³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand</td>
<td>0.41</td>
</tr>
<tr>
<td>Steel Shot</td>
<td>0.10</td>
</tr>
<tr>
<td>Plastic Bead</td>
<td>0.10</td>
</tr>
</tbody>
</table>

Calculations:

Flow Rate (FR) = Abrasive flow rate (lb/hr) of abrasive at nozzle pressure and internal nozzle diameter (ID)

D1 = Density of sand from Table 2 = 99 lb/ft³
ID1 = Internal diameter of nozzle for sand blasting from Table 3 = 0.5 inch
FR1 = Sand flow rate at nozzle pressure and internal diameter (ID1) from Table 3 = 835 lb/hr

D = Density of actual abrasive = 88 lb/ft³
ID = Internal diameter of actual nozzle = 0.5 inch
FR = Flow rate of actual abrasive (lb/hr) = 742.2 lb/hr (per nozzle)

Potential to Emit (before control) = EF x FR x (1 - w/200) x N

Potential to Emit (after control) = [Potential to Emit (before control)] x [1 - control efficiency]

Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [ton/2000 lbs]

METHODOLOGY

* Density of plastic bead abrasive provided by source and based on sample MSDS.
Flow Rate (FR) = Abrasive flow rate (lb/hr) of abrasive at nozzle pressure and internal nozzle diameter (ID)

D1 = Density of sand from Table 2 = 99 lb/ft³
ID1 = Internal diameter of nozzle for sand blasting from Table 3 = 0.5 inch
FR1 = Sand flow rate at nozzle pressure and internal diameter (ID1) from Table 3 = 835 lb/hr

FR = Flow rate of actual abrasive (lb/hr) = 742.2 lb/hr (per nozzle)

Potential to Emit (before control) = EF x FR x (1 - w/200) x N

Potential to Emit (after control) = [Potential to Emit (before control)] x [1 - control efficiency]

Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [ton/2000 lbs]
Appendix A: Emission Calculations

Abrasives Blasting - Confined

Blast 5

Company Name: Sony DADC
Address City IN Zip: 1800 N. Fruitridge Ave. Terre Haute, IN 47804
Permit Number: 167-42914-00032
Reviewer: Andrea C. Smith

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>0.66</td>
</tr>
<tr>
<td>Other</td>
<td>0.010</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 - Density of Abrasives (lb/ft³)

<table>
<thead>
<tr>
<th>Abrasive</th>
<th>Density (lb/ft³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al oxides</td>
<td>160</td>
</tr>
<tr>
<td>Sand</td>
<td>99</td>
</tr>
<tr>
<td>Steel</td>
<td>487</td>
</tr>
<tr>
<td>Plastic Bead</td>
<td>88</td>
</tr>
<tr>
<td>Other</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate (FR1) of sand through a blasting nozzle as a function of nozzle pressure and internal diameter (ID1)

<table>
<thead>
<tr>
<th>Nozzle Type (diameter)</th>
<th>Internal diameter, in</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 2 (1/8 inch)</td>
<td>0.125</td>
<td>26</td>
<td>35</td>
<td>42</td>
<td>49</td>
<td>55</td>
<td>63</td>
<td>70</td>
<td>77</td>
</tr>
<tr>
<td>No. 3 (3/16 inch)</td>
<td>0.1875</td>
<td>61</td>
<td>80</td>
<td>94</td>
<td>107</td>
<td>122</td>
<td>135</td>
<td>149</td>
<td>165</td>
</tr>
<tr>
<td>No. 4  (1/4 inch)</td>
<td>0.25</td>
<td>109</td>
<td>138</td>
<td>168</td>
<td>195</td>
<td>221</td>
<td>255</td>
<td>280</td>
<td>309</td>
</tr>
<tr>
<td>No. 5 (5/32 inch)</td>
<td>0.3125</td>
<td>205</td>
<td>247</td>
<td>292</td>
<td>354</td>
<td>377</td>
<td>420</td>
<td>462</td>
<td>507</td>
</tr>
<tr>
<td>No. 6 (3/8 inch)</td>
<td>0.375</td>
<td>385</td>
<td>472</td>
<td>560</td>
<td>645</td>
<td>705</td>
<td>820</td>
<td>905</td>
<td>980</td>
</tr>
<tr>
<td>No. 7 (7/16 inch)</td>
<td>0.4375</td>
<td>503</td>
<td>615</td>
<td>725</td>
<td>835</td>
<td>945</td>
<td>1070</td>
<td>1180</td>
<td>1285</td>
</tr>
<tr>
<td>No. 8 (1/2 inch)</td>
<td>0.5</td>
<td>620</td>
<td>750</td>
<td>880</td>
<td>990</td>
<td>1110</td>
<td>1300</td>
<td>1420</td>
<td>1500</td>
</tr>
<tr>
<td>No. 10 (5/8 inch)</td>
<td>0.625</td>
<td>820</td>
<td>990</td>
<td>1170</td>
<td>1336</td>
<td>1510</td>
<td>1680</td>
<td>1850</td>
<td>2030</td>
</tr>
<tr>
<td>No. 12 (7/8 inch)</td>
<td>0.75</td>
<td>1140</td>
<td>1420</td>
<td>1670</td>
<td>1915</td>
<td>2160</td>
<td>2400</td>
<td>2630</td>
<td>2880</td>
</tr>
<tr>
<td>No. 16 (1 inch)</td>
<td>1</td>
<td>2030</td>
<td>2460</td>
<td>2900</td>
<td>3340</td>
<td>3780</td>
<td>4200</td>
<td>4640</td>
<td>5000</td>
</tr>
</tbody>
</table>

CALCULATIONS

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

<table>
<thead>
<tr>
<th>Flow Rate (FR) = Abrasive flow rate (lb/hr) of abrasive at nozzle pressure and internal nozzle diameter (ID)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1 = Density of sand from Table 2 = 99 lb/ft³</td>
</tr>
<tr>
<td>ID1 = Internal diameter of nozzle for sand blasting from Table 3 = 0.25 inch</td>
</tr>
<tr>
<td>FR1 = Sand flow rate at nozzle pressure and internal diameter (ID1) from Table 3 = 309 lb/hr</td>
</tr>
<tr>
<td>D = Density of actual abrasive = 88 lb/ft³</td>
</tr>
<tr>
<td>ID = Internal diameter of actual nozzle = 0.25 inch</td>
</tr>
<tr>
<td>FR = Flow rate of actual abrasive (lb/hr) = 274.7 lb/hr (per nozzle)</td>
</tr>
</tbody>
</table>

Potential to Emit Before Control

FR = Flow rate of actual abrasive (lb/hr) = 274.67 lb/hr (per nozzle)

Potential to Emit (before control) = EF x FR x (1 - w/200) x N

PM/PM10/PM2.5

Potential to Emit (before control) = 2.7E-03 lb/hr

= 0.066 lb/day

= 0.012 ton/yr

Potential to Emit After Control

Emission Control Device Efficiency = 99.9%

Potential to Emit (after control) = 2.7E-03 lb/hr

= 0.066 lb/day

= 0.012 ton/yr

METHODOLOGY

* Density of plastic bead abrasive provided by source and based on sample MSDS.


Flow rate of actual abrasive (FR) (lb/hr) = FR1 x (ID/ID1)^2 x (D/D1)

Potential to Emit (before control) = EF x FR x (1 - w/200) x N (where w should be entered in as a whole number (if w is 50%, enter 50))

Potential to Emit (after control) = [Potential to Emit (before control)] x [1 - control efficiency]

Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [ton/2000 lbs]
### Table 1 - Emission Factors for Abrasives

<table>
<thead>
<tr>
<th>Abrasive</th>
<th>PM/PM10/PM2.5</th>
<th>Density (lb/ft³)</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>

### Table 2 - Density of Abrasives (lb/ft³)

<table>
<thead>
<tr>
<th>Abrasive</th>
<th>Density (lb/ft³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al oxides</td>
<td>160</td>
</tr>
<tr>
<td>Sand</td>
<td>99</td>
</tr>
<tr>
<td>Steel</td>
<td>487</td>
</tr>
<tr>
<td>Plastic Bead*</td>
<td>88</td>
</tr>
</tbody>
</table>

### Table 3 - Sand Flow Rate (FR₁) Through Nozzle (lb/hr)

Flow rate (FR₁) of sand through a blasting nozzle as a function of nozzle pressure and internal diameter (ID₁):

<table>
<thead>
<tr>
<th>Nozzle Pressure (psig)</th>
<th>Nozzle Type (diameter)</th>
<th>Internal Diameter, in</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. 2 (1/8 inch)</td>
<td>0.125</td>
</tr>
<tr>
<td></td>
<td>No. 3 (3/16 inch)</td>
<td>0.1875</td>
</tr>
<tr>
<td></td>
<td>No. 4 (1/4 inch)</td>
<td>0.25</td>
</tr>
<tr>
<td></td>
<td>No. 5 (5/16 inch)</td>
<td>0.3125</td>
</tr>
<tr>
<td></td>
<td>No. 6 (3/8 inch)</td>
<td>0.375</td>
</tr>
<tr>
<td></td>
<td>No. 7 (7/16 inch)</td>
<td>0.4375</td>
</tr>
<tr>
<td></td>
<td>No. 8 (1/2 inch)</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>No. 10 (5/8 inch)</td>
<td>0.625</td>
</tr>
<tr>
<td></td>
<td>No. 12 (3/4 inch)</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td>No. 16 (1 inch)</td>
<td>1</td>
</tr>
</tbody>
</table>

### Calculations

- **Adjusting Flow Rates for Different Abrasives and Nozzle Diameters**
  
  \[
  \text{Flow Rate (FR)} = \text{Abrasive flow rate (lb/hr)} \times \text{density of abrasive at nozzle pressure and internal nozzle diameter (ID)}
  \]

- **Potential to Emit Before Control**
  
  \[
  \text{EF} = \text{PM emission factor for actual abrasive from Table 1} = 0.010 \quad \text{lb PM/ lb abrasive}
  \]

  \[
  \text{PM/PM10/PM2.5} = \frac{\text{Potential to Emit (before control)}}{1 - \text{control efficiency}}
  \]

  \[
  \text{Potential to Emit After Control} = \text{Potential to Emit (before control)} \times \text{emission control device efficiency}
  \]

  \[
  \text{Potential to Emit (tons/year)} = \text{Potential to Emit (lbs/hour) \times 8760 hours/year \times 1 ton/2000 lbs}
  \]

**METHODOLOGY**

- Density of plastic bead abrasive provided by source and based on sample MSDS.
- Flow rate of actual abrasive (FR) (lb/hr) = FR₁ x (ID/ID₁)² x (D/D₁)
- Potential to Emit (before control) = EF x FR x (1 - w/200) x N (where w should be entered in as a whole number (if w is 50%, enter 50))
- Potential to Emit (after control) = [Potential to Emit (before control)] * [1 - control efficiency]
- Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [1 ton/2000 lbs]
Appendix A: Emission Calculations
Ablasive Blasting - Confined
Blast 7

Company Name: Sony DADC
Address City IN Zip: 1800 N. Fruitridge Ave. Terre Haute, IN 47804
Permit Number: 167-42914-00032
Reviewer: Andrea C. Smith

Table 1 - Emission Factors for Abrasives

<table>
<thead>
<tr>
<th>Abrasive</th>
<th>lb PM / lb abrasive</th>
<th>lb PM10 / lb PM</th>
<th>Al oxides</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand</td>
<td>0.041</td>
<td>0.70</td>
<td>180</td>
</tr>
<tr>
<td>Grit</td>
<td>0.010</td>
<td>0.70</td>
<td>497</td>
</tr>
<tr>
<td>Steel Shot</td>
<td>0.004</td>
<td>0.66</td>
<td>88</td>
</tr>
<tr>
<td>Other</td>
<td>0.010</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 - Density of Abrasives (lb/ft³)

<table>
<thead>
<tr>
<th>Abrasive</th>
<th>Density (lb/ft³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>At oxides</td>
<td>180</td>
</tr>
<tr>
<td>Sand</td>
<td>99</td>
</tr>
<tr>
<td>Grit</td>
<td>497</td>
</tr>
<tr>
<td>Steel Shot</td>
<td>88</td>
</tr>
<tr>
<td>Plastic Bead*</td>
<td>88</td>
</tr>
<tr>
<td>Other</td>
<td>88</td>
</tr>
</tbody>
</table>

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate (FR1) of sand through a blasting nozzle as a function of nozzle pressure and internal diameter (ID1)

<table>
<thead>
<tr>
<th>Nozzle Type (diameter)</th>
<th>Internal diameter, in</th>
<th>No. 2 (1/8 inch)</th>
<th>No. 3 (3/16 inch)</th>
<th>No. 4 (1/4 inch)</th>
<th>No. 5 (5/16 inch)</th>
<th>No. 6 (3/8 inch)</th>
<th>No. 7 (1/2 inch)</th>
<th>No. 8 (5/8 inch)</th>
<th>No. 10 (5/8 inch)</th>
<th>No. 12 (3/4 inch)</th>
<th>No. 16 (1 inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 2 (1/8 inch)</td>
<td>0.125</td>
<td>28</td>
<td>35</td>
<td>42</td>
<td>49</td>
<td>56</td>
<td>63</td>
<td>70</td>
<td>77</td>
<td>84</td>
<td>90</td>
</tr>
<tr>
<td>No. 3 (3/16 inch)</td>
<td>0.1875</td>
<td>65</td>
<td>89</td>
<td>107</td>
<td>127</td>
<td>149</td>
<td>175</td>
<td>197</td>
<td>221</td>
<td>250</td>
<td>280</td>
</tr>
<tr>
<td>No. 4 (1/4 inch)</td>
<td>0.25</td>
<td>109</td>
<td>138</td>
<td>166</td>
<td>195</td>
<td>221</td>
<td>250</td>
<td>280</td>
<td>311</td>
<td>352</td>
<td>399</td>
</tr>
<tr>
<td>No. 5 (5/16 inch)</td>
<td>0.3125</td>
<td>205</td>
<td>268</td>
<td>329</td>
<td>395</td>
<td>460</td>
<td>534</td>
<td>611</td>
<td>695</td>
<td>795</td>
<td>904</td>
</tr>
<tr>
<td>No. 6 (3/8 inch)</td>
<td>0.375</td>
<td>305</td>
<td>388</td>
<td>477</td>
<td>560</td>
<td>643</td>
<td>740</td>
<td>845</td>
<td>970</td>
<td>1105</td>
<td>1265</td>
</tr>
<tr>
<td>No. 7 (1/2 inch)</td>
<td>0.4375</td>
<td>425</td>
<td>544</td>
<td>685</td>
<td>800</td>
<td>945</td>
<td>1090</td>
<td>1245</td>
<td>1430</td>
<td>1650</td>
<td>1920</td>
</tr>
<tr>
<td>No. 8 (5/8 inch)</td>
<td>0.5</td>
<td>563</td>
<td>690</td>
<td>865</td>
<td>1005</td>
<td>1160</td>
<td>1325</td>
<td>1520</td>
<td>1750</td>
<td>1990</td>
<td>2260</td>
</tr>
<tr>
<td>No. 10 (5/8 inch)</td>
<td>0.625</td>
<td>703</td>
<td>855</td>
<td>1065</td>
<td>1260</td>
<td>1470</td>
<td>1680</td>
<td>1890</td>
<td>2120</td>
<td>2360</td>
<td>2620</td>
</tr>
<tr>
<td>No. 12 (3/4 inch)</td>
<td>0.75</td>
<td>925</td>
<td>1115</td>
<td>1395</td>
<td>1660</td>
<td>1915</td>
<td>2160</td>
<td>2410</td>
<td>2680</td>
<td>2950</td>
<td>3250</td>
</tr>
<tr>
<td>No. 16 (1 inch)</td>
<td>1</td>
<td>2030</td>
<td>2460</td>
<td>2900</td>
<td>3340</td>
<td>3780</td>
<td>4200</td>
<td>4640</td>
<td>5080</td>
<td>5520</td>
<td>6000</td>
</tr>
</tbody>
</table>

CALCULATIONS

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

Flow Rate (FR) = Abrasive flow rate (lb/hr) of abrasive at nozzle pressure and internal nozzle diameter (ID)

D1 = Density of sand from Table 2 = 99 lb/ft³
ID1 = Internal diameter of nozzle for sand blasting from Table 3 = 0.25 inch
FR1 = Sand flow rate at nozzle pressure and internal diameter (ID1) from Table 3 = 309 lb/hr

D = Density of actual abrasive = 88 lb/ft³
ID = Internal diameter of actual nozzle = 0.25 inch
FR = Flow rate of actual abrasive (lb/hr) = 274.7 lb/hr (per nozzle)

Potential to Emit Before Control

FR = Flow rate of actual abrasive (lb/hr) = 274.67 lb/hr (per nozzle)
w = fraction of time of wet blasting = 0%
N = number of nozzles = 1
EF = PM emission factor for actual abrasive from Table 1 = 0.010 lb PM / lb abrasive

PM/PM10/PM2.5 Potential to Emit (before control) = 2.747 lb/hr = 65.92 lb/day = 12.03 ton/yr

Potential to Emit After Control

Emission Control Device Efficiency = 99.9%
Potential to Emit (after control) = 2.7E-03 lb/hr = 0.066 lb/day = 0.012 ton/yr

METHODOLOGY

* Density of plastic bead abrasive provided by source and based on sample MSDS.
Flow rate of actual abrasive (FR) (lb/hr) = FR1 x (ID/ID1)^2 x (D/D1)
Potential to Emit (before control) = EF x FR x (1 - w/200) x N (where w should be entered in as a whole number (if w is 50%, enter 50))
Potential to Emit (after control) = [Potential to Emit (before control)] * [1 - control efficiency]
Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [ton/2000 lbs]

* Density of plastic bead abrasive provided by source and based on sample MSDS.
Flow rate of actual abrasive (FR) (lb/hr) = FR1 x (ID/ID1)^2 x (D/D1)
Potential to Emit (before control) = EF x FR x (1 - w/200) x N (where w should be entered in as a whole number (if w is 50%, enter 50))
Potential to Emit (after control) = [Potential to Emit (before control)] * [1 - control efficiency]
Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [ton/2000 lbs]
Appendix A: Emissions Calculations
Industrial Boilers (> 100 mmBtu/hr)
#1 and #2 Fuel Oil

Company Name: Sony DADC
Address City IN Zip: 1800 N. Fruitridge Ave. Terre Haute, IN 47804
Permit Number: 167-42914-00032
Reviewer: Andrea C. Smith

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>MMBtu/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>10.462</td>
</tr>
<tr>
<td>002</td>
<td>10.462</td>
</tr>
<tr>
<td>003</td>
<td>9.863</td>
</tr>
<tr>
<td>004</td>
<td>9.863</td>
</tr>
<tr>
<td>018</td>
<td>8.86</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Heat Input Capacity</th>
<th>Potential Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMBtu/hr</td>
<td>kgals/year</td>
</tr>
<tr>
<td>49.01</td>
<td>2467.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/kgal</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>2.0</td>
<td>2.5</td>
</tr>
<tr>
<td>PM10</td>
<td>2.3</td>
<td>2.8</td>
</tr>
<tr>
<td>direct PM2.5</td>
<td>1.8</td>
<td>1.9</td>
</tr>
<tr>
<td>SO2</td>
<td>7.1</td>
<td>87.6</td>
</tr>
<tr>
<td>NOx</td>
<td>24.0</td>
<td>29.6</td>
</tr>
<tr>
<td>VOC</td>
<td>0.20</td>
<td>0.2</td>
</tr>
<tr>
<td>CO</td>
<td>5.0</td>
<td>6.2</td>
</tr>
</tbody>
</table>

Methodology
1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu
Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 gallon per 1000 gallon x 1 gal per 0.140 MMBtu
Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, 1.3-3, and 1.3-6 (SCC 1-02-005-01/02/03) Supplement E 9/98
*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.
Note to Reviewer: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal)/2,000 lb/ton

Hazardous Air Pollutants (HAPs)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/mmBtu</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>4.6E-06</td>
<td>8.6E-04</td>
</tr>
<tr>
<td>Beryllium</td>
<td>3.0E-06</td>
<td>6.4E-04</td>
</tr>
<tr>
<td>Cadmium</td>
<td>3.0E-06</td>
<td>6.4E-04</td>
</tr>
<tr>
<td>Chromium</td>
<td>3.0E-06</td>
<td>6.4E-04</td>
</tr>
<tr>
<td>Lead</td>
<td>9.0E-06</td>
<td>6.4E-04</td>
</tr>
</tbody>
</table>

Methodology
No data was available in AP-42 for organic HAPs.
Potential Emissions (tons/year) = Potential Throughput (MMBtu/hr)*Emission Factor (lb/MMBtu)*8,760 hrs/yr / 2,000 lb/ton
Appendix A: Emissions Calculations
Commercial/Institutional/Residential Combustors (< 100 mmBtu/hr)
#1 and #2 Fuel Oil

Company Name: Sony DADC
Address City IN Zip: 1800 N. Fruitridge Ave. Terre Haute, IN 47804
Permit Number: 167-42914-00032
Reviewer: Andrea C. Smith

### Emission Unit

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>MMBtu/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>10.462</td>
</tr>
<tr>
<td>002</td>
<td>10.462</td>
</tr>
<tr>
<td>003</td>
<td>9.863</td>
</tr>
<tr>
<td>004</td>
<td>9.863</td>
</tr>
<tr>
<td>018</td>
<td>8.36</td>
</tr>
<tr>
<td></td>
<td>49.01</td>
</tr>
</tbody>
</table>

### Heat Input Capacity

<table>
<thead>
<tr>
<th>MM Btu/hr</th>
<th>kgals/year</th>
<th>S = Weight % Sulfur</th>
</tr>
</thead>
<tbody>
<tr>
<td>49.01</td>
<td>3066.6</td>
<td>0.5</td>
</tr>
</tbody>
</table>

### Pollutants

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/kgal</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>2.0</td>
<td>3.07</td>
</tr>
<tr>
<td>PM10**</td>
<td>2.38</td>
<td>3.65</td>
</tr>
<tr>
<td>direct PM2.5***</td>
<td>2.13</td>
<td>3.27</td>
</tr>
<tr>
<td>SO2</td>
<td>71</td>
<td>108.87</td>
</tr>
<tr>
<td>NOx</td>
<td>20.0</td>
<td>30.67</td>
</tr>
<tr>
<td>VOC</td>
<td>0.34</td>
<td>0.52</td>
</tr>
<tr>
<td>CO</td>
<td>5.0</td>
<td>7.67</td>
</tr>
</tbody>
</table>

### Methodology

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu
Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98 (see erata file)

*PM emission factor is filterable PM only.
**PM10 emission factor is filterable PM10 of 1.08 lb/kgal + condensable PM emission factor of 1.3 lb/kgal.
***Direct PM2.5 emission factor is filterable PM2.5 of 0.83 lb/kgal + condensable PM emission factor of 1.3 lb/kgal.

Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

### Hazardous Air Pollutants (HAPs)

#### HAPs - Metals

<table>
<thead>
<tr>
<th>Emission Factor in lb/mmBtu</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>4.0E-06</td>
</tr>
<tr>
<td>Beryllium</td>
<td>3.0E-06</td>
</tr>
<tr>
<td>Cadmium</td>
<td>3.0E-06</td>
</tr>
<tr>
<td>Chromium</td>
<td>3.0E-06</td>
</tr>
<tr>
<td>Lead</td>
<td>9.0E-06</td>
</tr>
</tbody>
</table>

#### HAPs - Metals (continued)

<table>
<thead>
<tr>
<th>Emission Factor in lb/mmBtu</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>3.0E-06</td>
</tr>
<tr>
<td>Manganese</td>
<td>6.0E-06</td>
</tr>
<tr>
<td>Nickel</td>
<td>3.0E-06</td>
</tr>
<tr>
<td>Selenium</td>
<td>1.5E-05</td>
</tr>
</tbody>
</table>

**Total:** 1.1E-02

### Methodology

No data was available in AP-42 for organic HAPs.
Potential Emissions (tons/year) = Throughput (mmBtu/hr)*Emission Factor (lb/mmBtu)*8,760 hrs/yr / 2,000 lb/ton
Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Company Name: Sony DADC
Address City IN Zip: 1800 N. Fruitridge Ave. Terre Haute, IN 47804
Permit Number: 167-42914-00032
Reviewer: Andrea C. Smith

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>MMBtu/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>10.462</td>
</tr>
<tr>
<td>002</td>
<td>10.462</td>
</tr>
<tr>
<td>003</td>
<td>9.863</td>
</tr>
<tr>
<td>004</td>
<td>9.863</td>
</tr>
<tr>
<td>018</td>
<td>8.36</td>
</tr>
<tr>
<td>Total</td>
<td>49.01</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/MMCF</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>1.9</td>
<td>0.40</td>
</tr>
<tr>
<td>PM10*</td>
<td>7.6</td>
<td>1.60</td>
</tr>
<tr>
<td>direct PM2.5*</td>
<td>7.6</td>
<td>1.60</td>
</tr>
<tr>
<td>SO2</td>
<td>0.6</td>
<td>0.13</td>
</tr>
<tr>
<td>NOx</td>
<td>100</td>
<td>21.05</td>
</tr>
<tr>
<td>VOC</td>
<td>5.5</td>
<td>1.16</td>
</tr>
<tr>
<td>CO</td>
<td>84</td>
<td>17.68</td>
</tr>
</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 #1-03-006-02, 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

Hazardous Air Pollutants (HAPs)

<table>
<thead>
<tr>
<th>HAPs - Organics</th>
<th>Benzene</th>
<th>Dichlorobenzene</th>
<th>Formaldehyde</th>
<th>Hexane</th>
<th>Toluene</th>
<th>Total - Organics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>2.1E-03</td>
<td>1.2E-03</td>
<td>7.5E-02</td>
<td>1.8E+00</td>
<td>3.4E-03</td>
<td>0.40</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>4.4E-04</td>
<td>2.5E-04</td>
<td>1.6E-02</td>
<td>0.38</td>
<td>7.2E-04</td>
<td>0.40</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HAPs - Metals</th>
<th>Lead</th>
<th>Cadmium</th>
<th>Chromium</th>
<th>Manganese</th>
<th>Nickel</th>
<th>Total - Metals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMcf</td>
<td>5.0E-04</td>
<td>1.1E-03</td>
<td>1.4E-03</td>
<td>3.9E-04</td>
<td>2.1E-03</td>
<td>1.2E-03</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>1.1E-04</td>
<td>2.3E-04</td>
<td>2.9E-04</td>
<td>8.0E-05</td>
<td>4.4E-04</td>
<td>1.2E-03</td>
</tr>
</tbody>
</table>

Methodology is the same as above.
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Total HAPs 0.40
Worst HAP 0.38
### Appendix A: Emissions Calculations

**Natural Gas Combustion Only**

<table>
<thead>
<tr>
<th>MM BTU/HR</th>
<th>014</th>
<th>4.19</th>
</tr>
</thead>
<tbody>
<tr>
<td>015</td>
<td>4.50</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>4.00</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>8.36</td>
<td></td>
</tr>
</tbody>
</table>

**Insign. Heaters**

| MM BTU/HR | 10.00 |

**Total** 31.50

<table>
<thead>
<tr>
<th>Heat Input Capacity</th>
<th>mMBtu/hr</th>
<th>Potential Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td>mMBtu/hr</td>
<td>mmscf</td>
<td>MMCF/yr</td>
</tr>
<tr>
<td>31.1</td>
<td>1020</td>
<td>266.7</td>
</tr>
</tbody>
</table>

**Pollutant**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/MMCF</th>
<th>PM*</th>
<th>PM10*</th>
<th>direct PM2.5*</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM2.5 emission factor is filterable and condensable PM2.5 combined.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Emission Factors for NOx:</strong> Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Potential Emission in tons/yr | 0.25 | 1.01 | 1.01 | 0.08 | 13.33 | 0.73 | 11.20 |

**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**

**Hazardous Air Pollutants (HAPs)**

<table>
<thead>
<tr>
<th>HAPs - Organics</th>
<th>Benzene</th>
<th>Dichlorobenzene</th>
<th>Formaldehyde</th>
<th>Hexane</th>
<th>Toluene</th>
<th>Total - Organics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMcf</td>
<td>2.1E-03</td>
<td>1.2E-03</td>
<td>7.5E-02</td>
<td>1.8E+00</td>
<td>3.4E-03</td>
<td>0.25</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>2.8E-04</td>
<td>1.6E-04</td>
<td>1.0E-02</td>
<td>0.24</td>
<td>4.5E-04</td>
<td>0.25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HAPs - Metals</th>
<th>Lead</th>
<th>Cadmium</th>
<th>Chromium</th>
<th>Manganese</th>
<th>Nickel</th>
<th>Total - Metals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMcf</td>
<td>5.0E-04</td>
<td>1.1E-03</td>
<td>1.4E-03</td>
<td>3.8E-04</td>
<td>2.1E-03</td>
<td>7.3E-04</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>8.7E-05</td>
<td>1.5E-04</td>
<td>1.5E-04</td>
<td>5.1E-05</td>
<td>2.8E-04</td>
<td>7.3E-04</td>
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</table>

Methodology is the same as above.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.
### Natural Gas Combustion Only

#### Emission Calculations

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>MMBtu/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>019</td>
<td>7.19</td>
</tr>
<tr>
<td>020</td>
<td>8.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15.99</strong></td>
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</tbody>
</table>

#### Heat Input Capacity

<table>
<thead>
<tr>
<th>MMBlu/hr</th>
<th>mmscf</th>
<th>MMCF/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>16.0</strong></td>
<td><strong>1020</strong></td>
<td><strong>137.3</strong></td>
</tr>
</tbody>
</table>

#### Pollutant Emissions

<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>
</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><strong>50</strong></td>
<td>5.5</td>
<td>84</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>0.13</td>
<td>0.52</td>
<td>0.52</td>
<td>0.04</td>
<td><strong>3.43</strong></td>
<td>0.38</td>
<td>5.77</td>
</tr>
</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 (MMBlu/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

#### Hazardous Air Pollutants (HAPs)

**HAPs - Organics**

<table>
<thead>
<tr>
<th>HAPs</th>
<th>Benzene</th>
<th>Dichlorobenzene</th>
<th>Formaldehyde</th>
<th>Hexane</th>
<th>Toluene</th>
<th>Total - Organics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCf</td>
<td>2.1E-04</td>
<td>1.2E-03</td>
<td>7.5E-02</td>
<td>1.8E+00</td>
<td>3.4E-03</td>
<td><strong>0.13</strong></td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>1.4E-04</td>
<td>8.2E-05</td>
<td>5.1E-03</td>
<td>0.12</td>
<td>2.3E-04</td>
<td></td>
</tr>
</tbody>
</table>

**HAPs - Metals**

<table>
<thead>
<tr>
<th>HAPs</th>
<th>Lead</th>
<th>Cadmium</th>
<th>Chromium</th>
<th>Manganese</th>
<th>Nickel</th>
<th>Total - Metals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCf</td>
<td>5.0E-04</td>
<td>1.1E-03</td>
<td>1.4E-03</td>
<td>3.8E-04</td>
<td>2.1E-03</td>
<td></td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>3.4E-05</td>
<td>7.6E-05</td>
<td>9.6E-05</td>
<td>2.6E-05</td>
<td>1.4E-04</td>
<td><strong>3.8E-04</strong></td>
</tr>
</tbody>
</table>

Methodology is the same as above.

The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.
**Appendix A: Emission Calculations**

**Large Reciprocating Internal Combustion Engines - Diesel Fuel**

**Output Rating (>600 HP)**

**Maximum Input Rate (>4.2 MMBtu/hr)**

**Company Name:** Sony DADC  
**Address City IN Zip:** 1800 N. Fruitridge Ave. Terre Haute, IN 47804  
**Permit Number:** 167-42914-00032  
**Reviewer:** Andrea C. Smith

---

### Emissions calculated based on output rating (hp)

<table>
<thead>
<tr>
<th>EU No.</th>
<th>HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>620</td>
</tr>
<tr>
<td>21</td>
<td>884</td>
</tr>
<tr>
<td>Total</td>
<td>1504</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output Horsepower Rating (hp)</th>
<th>1504.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Hours Operated per Year</td>
<td>500</td>
</tr>
<tr>
<td>Potential Throughput (hp-hr/yr)</td>
<td>752,000</td>
</tr>
<tr>
<td>Sulfur Content (S) of Fuel (% by weight)</td>
<td>0.500</td>
</tr>
</tbody>
</table>

### Pollutant Emission Factors

<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>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/hp-hr</td>
<td>7.00E-04</td>
<td>4.01E-04</td>
<td>3.89E-04</td>
<td>4.05E-03</td>
<td>2.40E-02</td>
<td>7.05E-04</td>
<td>5.50E-03</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>0.26</td>
<td>0.15</td>
<td>0.15</td>
<td>1.52</td>
<td>9.02</td>
<td>0.27</td>
<td>2.07</td>
</tr>
</tbody>
</table>

*PM emission factor is from AP-42 Table 3.4-1. The PM10 and PM2.5 emission factors for are from AP-42 Table 3.4-2. The PM10 emission factor is the sum of filterable PM10 and condensable particulate. The PM2.5 emission factor is the sum of filterable particulate less than 3 um and condensable particulate. Emission factors in lb/hp-hr were calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Tables 3.3-1 and 3.4-1).

**NOx emission factor: uncontrolled = 0.024 lb/hp-hr, controlled by ignition timing retard = 0.013 lb/hp-hr**

### Hazardous Air Pollutants (HAPs)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Benzene</th>
<th>Toluene</th>
<th>Xylene</th>
<th>Formaldehyde</th>
<th>Acetaldehyde</th>
<th>Acrolein</th>
<th>Total PAH HAPs***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/hp-hr****</td>
<td>5.43E-06</td>
<td>1.97E-06</td>
<td>1.35E-06</td>
<td>5.52E-07</td>
<td>1.76E-07</td>
<td>5.52E-08</td>
<td>1.48E-06</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>2.04E-03</td>
<td>7.40E-04</td>
<td>5.08E-04</td>
<td>2.08E-04</td>
<td>6.63E-05</td>
<td>2.07E-05</td>
<td>5.58E-04</td>
</tr>
</tbody>
</table>

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Tables 3.3-1 and 3.4-1).

### Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1, 3.4-2, 3.4-3, and 3.4-4.

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
### Appendix A: Emission Calculations

**Reciprocating Internal Combustion Engines - Diesel Fuel**

**Output Rating (<=600 HP)**

**Maximum Input Rate (<=4.2 MMBtu/hr)**

**Company Name:** Sony DADC  
**Address City IN Zip:** 1800 N. Fruitridge Ave. Terre Haute, IN 47804  
**Permit Number:** 167-42914-00032  
**Reviewer:** Andrea C. Smith

<table>
<thead>
<tr>
<th>EU No.</th>
<th>HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>007</td>
<td>166</td>
</tr>
<tr>
<td>008</td>
<td>122</td>
</tr>
<tr>
<td>009</td>
<td>188</td>
</tr>
<tr>
<td>010</td>
<td>77</td>
</tr>
<tr>
<td>Total</td>
<td>553</td>
</tr>
</tbody>
</table>

Emissions calculated based on output rating (hp)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/hp-hr</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>0.0022</td>
<td>0.30</td>
</tr>
<tr>
<td>PM10*</td>
<td>0.0022</td>
<td>0.30</td>
</tr>
<tr>
<td>direct PM2.5*</td>
<td>0.0022</td>
<td>0.30</td>
</tr>
<tr>
<td>SO2</td>
<td>0.00205</td>
<td>0.28</td>
</tr>
<tr>
<td>NOx</td>
<td>0.0310</td>
<td>4.29</td>
</tr>
<tr>
<td>VOC</td>
<td>0.0025</td>
<td>0.35</td>
</tr>
<tr>
<td>CO</td>
<td>0.00668</td>
<td>0.92</td>
</tr>
</tbody>
</table>

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/hp-hr***</th>
<th>Potential Emission in tons/yr***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>6.53E-06</td>
<td>9.03E-04</td>
</tr>
<tr>
<td>Toluene</td>
<td>2.86E-06</td>
<td>3.96E-04</td>
</tr>
<tr>
<td>Xylene</td>
<td>2.00E-06</td>
<td>2.76E-04</td>
</tr>
<tr>
<td>1,3-Butadiene</td>
<td>2.74E-07</td>
<td>3.78E-05</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>8.26E-06</td>
<td>1.14E-03</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>5.37E-06</td>
<td>7.42E-04</td>
</tr>
<tr>
<td>Acrolein</td>
<td>6.48E-07</td>
<td>8.95E-05</td>
</tr>
<tr>
<td>Total PAH HAPs**</td>
<td>1.18E-06</td>
<td>1.63E-04</td>
</tr>
</tbody>
</table>

**Methodology**

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.3-1 and 3.3-2.

Potential Throughput (hp-hr/yr) = \( \text{[Output Horsepower Rating (hp)]} \times \text{[Maximum Hours Operated per Year]} \)

Potential Emission (tons/yr) = \( \text{[Potential Throughput (hp-hr/yr)]} \times \text{[Emission Factor (lb/hp-hr)]} \times [2,000 \text{ lb/ton}] \)
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
Maximum Input Rate (<=4.2 MMBtu/hr)

Company Name: Sony DADC
Address City IN Zip: 1800 N. Fruitridge Ave. Terre Haute, IN 47804
Permit Number: 167-42914-00032
Reviewer: Andrea C. Smith

<table>
<thead>
<tr>
<th>EU No.</th>
<th>HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>011</td>
<td>255</td>
</tr>
<tr>
<td>026</td>
<td>225</td>
</tr>
<tr>
<td>Total</td>
<td>480</td>
</tr>
</tbody>
</table>

Emissions calculated based on output rating (hp)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/hp-hr</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>0.0022</td>
<td>0.26</td>
</tr>
<tr>
<td>PM10*</td>
<td>0.0022</td>
<td>0.26</td>
</tr>
<tr>
<td>direct PM2.5*</td>
<td>0.0022</td>
<td>0.26</td>
</tr>
<tr>
<td>SO2</td>
<td>0.00205</td>
<td>0.25</td>
</tr>
<tr>
<td>NOx</td>
<td>0.0310</td>
<td>3.72</td>
</tr>
<tr>
<td>VOC</td>
<td>0.0026</td>
<td>0.30</td>
</tr>
<tr>
<td>CO</td>
<td>0.00668</td>
<td>0.80</td>
</tr>
</tbody>
</table>

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/hp-hr****</th>
<th>Potential Emission in tons/yr ****</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>6.53E-06</td>
<td>6.53E-06</td>
</tr>
<tr>
<td>Toluene</td>
<td>2.66E-06</td>
<td>2.66E-06</td>
</tr>
<tr>
<td>Xylene</td>
<td>2.00E-06</td>
<td>2.00E-06</td>
</tr>
<tr>
<td>1,3-Butadiene</td>
<td>2.74E-07</td>
<td>2.74E-07</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>8.26E-06</td>
<td>8.26E-06</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>5.37E-06</td>
<td>5.37E-06</td>
</tr>
<tr>
<td>Acrolein</td>
<td>6.48E-07</td>
<td>6.48E-07</td>
</tr>
<tr>
<td>Total PAH HAPs***</td>
<td>1.18E-06</td>
<td>1.18E-06</td>
</tr>
</tbody>
</table>

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)
****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.3-1 and 3.3-2.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
January 5, 2021

Kelly Yochum
Sony DADC
1800 N Fruitridge Ave
Terre Haute, IN 47804

Re: Public Notice
Sony DADC
Permit Level: FESOP w/ New Source Review
Permit Number: 167-42914-00032

Dear Ms. Yochum:

Enclosed is the Notice of 30-Day Period for Public Comment for your draft air permit.

Our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person. The Notice of 30-Day Period for Public Comment has also been sent to the OAQ Permits Branch Interested Parties List and, if applicable, your Consultant/Agent and/or Responsible Official/Authorized Individual.

The preliminary findings, including the draft permit, technical support document, emission calculations, and other supporting documents, are available electronically at:

IDEM’s online searchable database: http://www.in.gov/apps/idem/caats/. Choose Search Option by Permit Number, then enter permit 42914

and

IDEM’s Virtual File Cabinet (VFC): http://www.IN.gov/idem. Enter VFC in the search box, then search for permit documents using a variety of criteria, such as Program area, date range, permit #, Agency Interest Number, or Source ID.

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 Vigo County Public Library, 1 Library Square in Terre Haute, IN. 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 draft permit 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 Andrea C. Smith, 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 4-6543 or dial (317) 234-6543.

Sincerely,

Theresa Weaver

Theresa Weaver
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover Letter access via website 8/10/2020
January 5, 2021

To: Vigo County Public 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: Sony DADC
Permit Number: 167-42914-00032

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 5, 2021
Sony DADC
167-42914-00032

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 Joanne Smiddie-Brush with the Air Permits Administration Section at 1-800-451-6027, ext. 3-0185 or via e-mail at JBRUSH@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 2/28/2020
## Mail Code 61-53

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<th>Act. Value (If Registered)</th>
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<th>S.H. Fee</th>
<th>Rest. Del. Fee</th>
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<tr>
<td>1</td>
<td></td>
<td>Kelly Yochum  Sony DADC 1800 N Fruitridge Ave Terre Haute IN 47804 (Source CAATS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Michael Mitchell  Vice President Sony DADC 1800 N Fruitridge Ave Terre Haute IN 47804 (RO CAATS)</td>
<td></td>
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<tr>
<td>3</td>
<td></td>
<td>Vigo County Board of Commissioners  County Annex, 121 Oak Street Terre Haute IN 47807 (Local Official)</td>
<td></td>
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<tr>
<td>4</td>
<td></td>
<td>Terre Haute City Council and Mayors Office 17 Harding Ave Terre Haute IN 47807 (Local Official)</td>
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<tr>
<td>5</td>
<td></td>
<td>Vigo County Health Department  147 Oak Street Terre Haute IN 47807 (Health Department)</td>
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<td></td>
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<tr>
<td>6</td>
<td></td>
<td>Vigo County Public Library 1 Library Square Terre Haute IN 47807-3609 (Library)</td>
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<tr>
<td>7</td>
<td></td>
<td>J.P. Roehm  PO Box 303 Clinton IN 47842 (Affected Party)</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>Mr. Mark Fitton Tribune-Star 222 S. 7th Street Terre Haute IN 47807 (Affected Party)</td>
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</tr>
</tbody>
</table>

### Remarks

- 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 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.