NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT

Preliminary Findings Regarding the Renewal of a Part 70 Operating Permit for CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant in Marion County

Part 70 Operating Permit Renewal No.: T097-40933-00032

The Indiana Department of Environmental Management (IDEM) has received an application from CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant located at 2700 South Belmont Avenue, Indianapolis, IN 46221 for a renewal of its Part 70 Operating Permit issued on October 14, 2014. If approved by IDEM’s Office of Air Quality (OAQ), this proposed renewal would allow CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant to continue to operate its existing source.

This draft permit does not contain any new equipment that would emit air pollutants; however, 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). This notice fulfills the public notice procedures to which those conditions are subject. IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow for these changes.

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

West Indianapolis Branch, Indianapolis Public Library
1216 S. Kappes Street
Indianapolis, IN 46221

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

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

How can you participate in this process?

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

You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the air pollution impact of this draft permit are received, with a request for a public hearing, IDEM will decide whether or not to hold a public hearing. IDEM could also decide to hold a public meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEM will make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing, you would have an opportunity to submit written comments and make verbal comments. At a meeting, you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEM staff.
Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM’s mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit number T097-40933-00032 in all correspondence.

Comments should be sent to:

Deena Levering
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for Deena Levering or (317) 234-5400
Or dial directly: (317) 234-5400
Fax: (317) 232-6749 attn: Deena Levering
E-mail: dleverin@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, at 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 Deena Levering of my staff at the above address.

Heath Hartley, Section Chief
Permits Branch
Office of Air Quality
Part 70 Operating Permit Renewal

OFFICE OF AIR QUALITY

CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant
2700 South Belmont Avenue
Indianapolis, Indiana  46221

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

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

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

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

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

The Permittee owns and operates a stationary municipal treatment plant with sewage sludge incinerators.

Source Address: 2700 South Belmont Avenue, Indianapolis, Indiana 46221
General Source Phone Number: (317) 927-4393
SIC Code: 4952 (Sewerage Systems)
County Location: Marion Center Township
Source Location Status: Nonattainment for SO2 standard
Attainment for all other criteria pollutants
Source Status: Part 70 Operating Permit Program
Major Source, under PSD and Emission Offset Rules
Area Source, Section 112 of the Clean Air Act
Not 1 of 28 Source Categories

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

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

(a) One (1) Nichols multiple hearth sewage sludge incinerator, identified as I1, constructed in 1970 and modified in 2014, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-1) for control of PM and metals, one (1) venturi wet scrubber (HFINSR301) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-1) for control of organics, and one (1) activated carbon adsorber (AC-1) for polishing of organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I1 with a capacity of 22.5 million Btu/hr total. A CEMS is used for CO.

This unit is a new affected source under 40 CFR 60, Subpart LLLL.
This unit is an affected source under 40 CFR 61, Subpart C.
This unit is an affected source under 40 CFR 61, Subpart E.

(b) One (1) Nichols multiple hearth sewage sludge incinerator, identified as I2, constructed in 1970 and rehabilitated in 2003, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-2) for control of PM and metals, one (1) venturi wet scrubber (HFINSR302) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-2) for control of organics, and one (1) activated carbon adsorber (AC-2) for polishing of organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I2, with a capacity of 22.5 Million BTU/hr total. A CEMS is used for CO.
This unit is a new affected source under 40 CFR 60, Subpart LLLL.
This unit is an affected source under 40 CFR 61, Subpart C.
This unit is an affected source under 40 CFR 61, Subpart E.

(c) One (1) Nichols multiple hearth sewage sludge incinerator, identified as I3, constructed in 1970 and modified in 2015, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-3) for control of PM and metals, one (1) venturi wet scrubber (HFINSR303) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-3) for control of organics, and one (1) activated carbon adsorber (AC-3) for polishing of organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I3 with a capacity of 22.5 million BTU/hr total. A CEMS is used for CO.

This unit is a new affected source under 40 CFR 60, Subpart LLLL.
This unit is an affected source under 40 CFR 61, Subpart C.
This unit is an affected source under 40 CFR 61, Subpart E.

(d) One (1) Nichols multiple hearth sewage sludge incinerator, identified as I4, constructed in 1970 and modified in 2015, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-4) for control of PM and metals, one (1) venturi wet scrubber (HFINSR304) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-4) for control of organics, and one (1) activated carbon adsorber (AC-4) for polishing organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I4 with a capacity of 22.5 million BTU/hr total. A CEMS is used for CO.

This unit is a new affected source under 40 CFR 60, Subpart LLLL.
This unit is an affected source under 40 CFR 61, Subpart C.
This unit is an affected source under 40 CFR 61, Subpart E.

(e) One (1) Stone Johnston Corp. natural gas boiler with serial number 843402, identified as B2, constructed in 1987, with a maximum heat input capacity of 12.6 million BTU per hour, using no controls, and exhausting to stack No. 09.

(f) One (1) Stone Johnston Corp. natural gas boiler with serial number 843403, identified as B3, constructed in 1987, with a maximum heat input capacity of 12.6 million BTU per hour, using no controls, and exhausting to stack No. 10.

A.3 Specifically Regulated Insignificant Activities

[326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]

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

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

(b) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu per hour, except where total capacity of equipment operated by one
stationary source exceeds 2,000,000 Btu per hour.

(c) Emergency diesel generators not exceeding 1600 horsepower:

(1) One (1) diesel-fired emergency generator, identified as Generator-1, constructed in 1988, with a maximum output rating of 480 hp.

This unit is an existing affected source under 40 CFR 63, Subpart ZZZZ.

(2) One (1) diesel-fired emergency generator, identified as Generator-8, constructed in 2010, with a maximum output rating of 525 hp.

This unit is a new affected source under 40 CFR 60, Subpart IIII.
This unit is a new affected source under 40 CFR 63, Subpart ZZZZ.

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

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

(f) Space heaters, process heaters, heat treat furnaces, or boilers using natural gas fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.

(1) Twenty-four (24) natural gas fired space heaters, with a combined maximum heat input capacity of 4.25 MMBtu/hr.

(2) Four (4) natural gas fired hot water heaters, with a combined maximum heat input capacity of 1.1999 MMBtu/hr.

(3) Fourteen (14) natural gas fired make up air units, with a combined maximum heat input capacity of 14.132 MMBtu/hr.

(4) One (1) Landa natural gas fired power washer unit, with a maximum heat input capacity of 0.35 MMBtu/hr.

(5) Five (5) natural gas fired flue gas condensing boilers, identified as B1a through B1e, approved in 2018 for construction, with a maximum capacity of 2.0 MMBtu/hr each, using low NOx burners, and exhausting to stack 08.

(6) Two (2) natural gas fired boilers, each with a maximum heat input capacity of 0.505 MMBtu/hr.

(g) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, vehicles, and having a storage capacity less than or equal to 10,500 gallons. Such storage tanks may be in a fixed location or on mobile equipment.

(1) One (1) gasoline storage tank, identified as Tank 029, with a maximum capacity of 10,000 gallons, and a throughput of 58,000 gallons per year.

This unit is an affected source under 40 CFR 63, Subpart CCCCCC.
(h) One (1) diesel storage tank, identified as Tank 030, constructed in 1995, with a maximum capacity of 8,000 gallons, and a throughput of 59,000 gallons per year.

(i) The following VOC or HAP storage containers:
   (1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughput less than 12,000 gallons.
   (2) Vessels storing lubricating oils, hydraulic oils, and machining fluids.
      (i) One (1) used oil storage tank, identified as Tank 084A, with a maximum capacity of 2,000 gallons;
      (ii) Four (4) virgin lubricating oil tanks, with a maximum capacity of 200 gallons each.
      (iii) One (1) used oil storage tank, identified as Tank 092, with a maximum capacity of 550 gallons.

(j) Filling drums, pails, or other packaging containers with lubricating oils, waxes, and greases.

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

(l) Cleaners and solvents characterized as follows: (a) having a vapor pressure equal to or less than 2 kPa (15 mm Hg) or 0.1 psi measured at 38 °C (100 °F) or; (b) having a vapor pressure equal to or less than 0.7 kPa (5 mm Hg) or 0.1 psi measured at 20 °C (68 °F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

(m) Closed loop heating and cooling systems.

(n) Activities associated with the transportation and treatment of sanitary sewage, provided discharge to the treatment plant is under the control of the owner/operator, that is, an on-site sewage treatment facility.

(o) Noncontact cooling tower systems with natural draft cooling towers not regulated under a NESHAP.

(p) Stockpiled soils from soil remediation activities that are covered and waiting transport for disposal.

(q) On-site fire and emergency response training approved by the department.

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

(s) Unloading of septage from trucks.

(t) Transport, loading, and unloading of incinerator ash (including quenching of ash).

(u) Collection of recoverable waste oil.

(v) Routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process, including purging of gas lines and purging of vessels. [326 IAC 2-7-1(21)(G)(xvii)]
(w) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks and fluid handling equipment. [326 IAC 2-7-1(21)(G)(xvii)]

(x) Purge double block and bleed valves. [326 IAC 2-7-1(21)(G)(xvii)]

(y) Equipment related to manufacturing activities not resulting in the emission of HAPs; brazing equipment, cutting torches, soldering equipment, welding equipment.

(z) Other categories with emissions below insignificant thresholds:

(1) A sludge ash monofill that was capped in 1999 but was previously used for the on-site disposal of ash (bottom ash and ash collected from the scrubbers) from the incineration of sewage sludge.

(2) Wastewater treatment operations which includes plant influent systems, headworks trash rake building, headworks raw sewage pump building, headworks bar screen building, headworks grit chambers, Southport gate structure, primary treatment systems, grease and scum building, primary effluent diversion structure, pig retrieval structure, bio-roughing, nitrification system, effluent filter building and disinfection system, gravity belt thickening, and dewatering operations. No affected industrial source(s) of wastewater subject to specific NESHAP requirements for their wastewater treatment have provided notification of their intention to discharge their wastewater subject to NESHAP requirements as a method to comply with their compliance requirements.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

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

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

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

B.1 Definitions [326 IAC 2-7-1]

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

B.2 Permit Term [326 IAC 2-7-5(2)][326 IAC 2-1.1-9.5][326 IAC 2-7-4(a)(1)(D)][IC 13-15-3-6(a)]

(a) This permit, T097-40933-00032, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

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

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

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

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

B.4 Enforceability [326 IAC 2-7-7][IC 13-17-12]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U.S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:
(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(35), and

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

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

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

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

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

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

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

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

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

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

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

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

1. An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
2. The permitted facility was at the time being properly operated;
3. During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
4. For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;
   - Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
   - Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
   - Facsimile Number: 317-233-6865
5. For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

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

   The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:
   - A description of the emergency;
   - Any steps taken to mitigate the emissions; and
   - Corrective actions taken.
The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

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

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

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

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

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

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

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

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

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

1. The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
2. The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
3. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
4. The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

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

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

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

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

(a) All terms and conditions of permits established prior to T097-40933-00032 and issued pursuant to permitting programs approved into the state implementation plan have been either:

1. incorporated as originally stated,
2. revised under 326 IAC 2-7-10.5, or
3. deleted under 326 IAC 2-7-10.5.

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

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

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

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

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit.
The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

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

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

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

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

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

Request for renewal shall be submitted to:

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

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

1. Submitted at least nine (9) months prior to the date of the expiration of this permit; and

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

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

B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

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

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

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ or U.S. EPA is required.
(e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

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

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

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

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

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

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

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

B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]
(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

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

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

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

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]
### B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

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

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

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

### B.24 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314] [326 IAC 1-1-6]

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

Entire Source

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

C.1 Opacity  [326 IAC 5-1]

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

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

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

C.2 Open Burning  [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.3 Incineration  [326 IAC 4-2] [326 IAC 9-1-2]

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

C.4 Fugitive Dust Emissions  [326 IAC 6-4]

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

C.5 Asbestos Abatement Projects  [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

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

(A) Asbestos removal or demolition start date;
(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

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

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

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

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

Testing Requirements [326 IAC 2-7-6(1)]

C.6 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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

**Compliance Requirements [326 IAC 2-1.1-11]**

C.7 Compliance Requirements [326 IAC 2-1.1-11]

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

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

C.8 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

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

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

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

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

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

C.9 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

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

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

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

C.10 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

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

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

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

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

C.12 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

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

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

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

1. initial inspection and evaluation;
2. recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or
3. any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

1. monitoring results;
2. review of operation and maintenance procedures and records; and/or
3. inspection of the control device, associated capture system, and the process.
(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

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

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

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

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

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

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

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

C.14 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

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

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

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

The statement must be submitted to:

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

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

C.15 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]
[326 IAC 2-2][326 IAC 2-3]

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

(AA) All calibration and maintenance records.
(BB) All original strip chart recordings for continuous monitoring instrumentation.
(CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following, where applicable:
(AA) The date, place, as defined in this permit, and time of sampling or measurements.
(BB) The dates analyses were performed.
(CC) The company or entity that performed the analyses.
(DD) The analytical techniques or methods used.
(EE) The results of such analyses.
(FF) The operating conditions as existing at the time of sampling or measurement.

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

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

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

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

(A) A description of the project.
(B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

(i) Baseline actual emissions;
(ii) Projected actual emissions;
(iii) Amount of emissions excluded under section 326 IAC 2-2-1(pp)(2)(A)(iii) and/or 326 IAC 2-3-1 (kk)(2)(A)(iii); and
(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
(d) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)) that a “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

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

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

C.16 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2][326 IAC 2-3]

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

(b) The address for report submittal is:

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

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

(d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

(e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any “project” (as defined in 326 IAC 2-2-1 (oo) and/or 326 IAC 2-3-1 (jj)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:
(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C - General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (ww) and/or 326 IAC 2-3-1 (pp), for that regulated NSR pollutant, and

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

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

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

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

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

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

Reports required in this part shall be submitted to:

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

(g) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C - General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

C.17 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:

(a) One (1) Nichols multiple hearth sewage sludge incinerator, identified as I1, constructed in 1970 and modified in 2014, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-1) for control of PM and metals, one (1) venturi wet scrubber (HFINSR301) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-1) for control of organics, and one (1) activated carbon adsorber (AC-1) for polishing of organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I1 with a capacity of 22.5 million Btu/hr total. A CEMS is used for CO.

This unit is a new affected source under 40 CFR 60, Subpart LLLL.
This unit is an affected source under 40 CFR 61, Subpart C.
This unit is an affected source under 40 CFR 61, Subpart E.

(b) One (1) Nichols multiple hearth sewage sludge incinerator, identified as I2, constructed in 1970 and rehabilitated in 2003, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-2) for control of PM and metals, one (1) venturi wet scrubber (HFINSR302) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-2) for control of organics, and one (1) activated carbon adsorber (AC-2) for polishing of organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I2, with a capacity of 22.5 Million BTU/hr total. A CEMS is used for CO.

This unit is a new affected source under 40 CFR 60, Subpart LLLL.
This unit is an affected source under 40 CFR 61, Subpart C.
This unit is an affected source under 40 CFR 61, Subpart E.

(c) One (1) Nichols multiple hearth sewage sludge incinerator, identified as I3, constructed in 1970 and modified in 2015, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-3) for control of PM and metals, one (1) venturi wet scrubber (HFINSR303) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-3) for control of organics, and one (1) activated carbon adsorber (AC-3) for polishing of organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I3 with a capacity of 22.5 million BTU/hr total. A CEMS is used for CO.

This unit is a new affected source under 40 CFR 60, Subpart LLLL.
This unit is an affected source under 40 CFR 61, Subpart C.
This unit is an affected source under 40 CFR 61, Subpart E.

(d) One (1) Nichols multiple hearth sewage sludge incinerator, identified as I4, constructed in 1970 and modified in 2015, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-4) for control of PM and metals, one (1) venturi wet scrubber (HFINSR304) for control of PM and acid gases, one (1) regenerative thermal oxidizer...
(RTO-4) for control of organics, and one (1) activated carbon adsorber (AC-4) for polishing organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I4 with a capacity of 22.5 million BTU/hr total. A CEMS is used for CO.

This unit is a new affected source under 40 CFR 60, Subpart LLLL.
This unit is an affected source under 40 CFR 61, Subpart C.
This unit is an affected source under 40 CFR 61, Subpart E.

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

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

D.1.1 PSD Minor Limits [326 IAC 2-2]

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

(a) The amount of dry sewage sludge delivered to the No. 2 Incinerator shall be limited to less than 17,712 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) Emissions of CO from the No. 2 Incinerator shall not exceed 51.78 pounds per ton of dry sewage sludge burned.

Compliance with these limits shall limit the potential to emit from Significant Source Modification 097-16971-00032, issued October 15, 2003 of CO to 458.58 tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable.

The Permittee may petition to have the limits modified based on the results of the stack testing provided that the resulting allowable CO emissions are less than 458.58 tons per year, and the emissions of any other criteria pollutant are not increased above the PSD significant threshold listed in 326 IAC 2-2-1(ww)(1).

D.1.2 Emission Offset Minor Limits [326 IAC 2-3]

In order to render the requirements of 326 IAC 2-3 (Emission Offset) not applicable, the Permittee shall comply with the following.

(a) The total amount of sewage sludge incinerated by all the incinerators (I1 through I4), shall not exceed 62,050 dry tons of sludge per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The total particulate matter emissions from all the incinerators (I1 through I4) shall not exceed 1.3 lbs/ton;

These emission offset limits were established on March 11, 1986 to provide an emission offset for the construction of a municipal solid waste incinerator at another site owned by the City of Indianapolis because Marion County was non-attainment for particulate matter at the time.

D.1.3 Sulfur Dioxide Emission Limitations [326 IAC 7-4]

Pursuant to 326 IAC 7-4, sulfur dioxide (SO2) emissions from the four (4) sewage sludge incinerators (I1 through I4) shall comply with the SO2 limit in 40 CFR 60, Subpart LLLL. Pursuant to 40 CFR 60, Subpart LLLL, the four (4) sewage sludge incineration units shall not exceed 26 parts per million by dry volume for SO2 corrected to 7 percent oxygen.
D.1.4 Hazardous Air Pollutant (HAP) Minor Limit [40 CFR 63]

In order to assure this source is an area source of HAPs under Section 112 of the Clean Air Act (CAA), the Permittee shall comply with the following:

(a) The total amount of sewage sludge incinerated by all the incinerators (I1 through I4), shall not exceed 62,050 dry tons of sludge per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) Phosphorus emissions from the sewage sludge incinerators shall not exceed 0.32 pounds per ton of sewage incinerated.

(c) Total HAP emissions from the sewage sludge incinerators shall not exceed 0.76 pounds per ton of sewage incinerated.

Compliance with these limits, combined with the potential to emit phosphorus from all other emission units at this source, shall limit the source-wide total potential to emit of any single HAP to less than ten (10) tons per twelve (12) consecutive month period, total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) not applicable, and this source is an area source of HAP emissions under Section 112 of the Clean Air Act (CAA).

D.1.5 Incinerators [326 IAC 4-2-2]

Pursuant to 326 IAC 4-2-2 (Incinerators), the Permittee shall comply with the following for each of the sewage sludge incineration units (I1 through I4):

(a) All incinerators shall comply with the following requirements:

(1) Consist of primary and secondary chambers or the equivalent.

(2) Be equipped with a primary burner unless burning only wood products.

(3) Comply with 326 IAC 5-1 and 326 IAC 2.

(4) Be maintained, operated, and burn waste in accordance with the manufacturer's specifications or an operation and maintenance plan as specified in subsection (c).

(5) Not emit particulate matter in excess of one (1) of the following:

(A) Three-tenths (0.3) pound of particulate matter per one thousand (1000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air for incinerators with a maximum solid waste capacity of greater than or equal to two hundred (200) pounds per hour.

(B) Five -tenths (0.5) pound of particulate matter per one thousand (1000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air for incinerators with solid waste capacity less than two hundred (200) pounds per hour.

(6) If any of the requirements of subdivisions (1) through (5) are not met, then the owner or operator shall stop charging the incinerator until adjustments are made that address the underlying cause of the deviation.

(b) An incinerator is exempt from subsection (a)(5) if subject to a more stringent particulate

(c) An owner or operator developing an operation and maintenance plan pursuant to subsection (a)(4) must comply with the following:

(1) The operation and maintenance plan must be designed to meet the particulate matter emission limitation specified in subsection (a)(5) and include the following:

(A) Procedures for receiving, handling, and charging waste.

(B) Procedures for incinerator startup and shutdown.

(C) Procedures for responding to a malfunction.

(D) Procedures for maintaining proper combustion air supply levels.

(E) Procedures for operating the incinerator and associated air pollution control systems.

(F) Procedures for handling ash.

(G) A list of wastes that can be burned in the incinerator.

(2) Each incinerator operator shall review the plan before initial implementation of the operation and maintenance plan and annually thereafter.

(3) The operation and maintenance plan must be readily accessible to incinerator operators.

(4) The owner or operator of the incinerator shall notify the department, in writing, thirty (30) days after the operation and maintenance plan is initially developed pursuant to this section.

(d) The owner or operator of the incinerator must make the manufacturer's specification or the operation and maintenance plan available to the department upon request.

D.1.6 Particulate Matter (PM) [326 IAC 6.5-6-35]

Pursuant to 326 IAC 6.5-6-35, particulate matter (PM) emissions from the four (4) sewage sludge incineration units (I1 through I4), shall not exceed 72.5 tons per year or 0.030 grains per dry standard cubic foot (dscf).

D.1.7 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.1.8 Testing Requirements [326 IAC 2-1.1-11][40 CFR 60, Subpart LLLL][40 CFR 61, Subpart C][40 CFR 61, Subpart E]

(a) In order to demonstrate compliance with Conditions D.1.2 and D.1.3, the Permittee shall perform PM and SO2 testing of the four (4) sewage sludge incinicators (I1 through I4) utilizing methods as approved by the Commissioner at least once every 3 years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C
Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition.

(b) In order to demonstrate compliance with Condition D.1.4(b), the Permittee shall perform phosphorus testing on one (1) of the four (4) sewage sludge incinerators (I1 through I4) utilizing methods as approved by the Commissioner at least once every 3 years from the date of the most recent valid compliance demonstration, with the initial test being conducted at the next testing of any incinerator. Testing shall alternate amongst the four (4) sewage sludge incinerators (I1 through I4), such that no incinerator shall be tested for a second time until all four (4) sewage sludge incinerators have been tested. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition.

(c) In order to demonstrate compliance with 40 CFR 61.32(a), the Permittee shall perform beryllium (Be) testing of the four (4) sewage sludge incinerators (I1 through I4) utilizing methods as approved by the Commissioner at least once every 3 years from the date of the most recent valid compliance demonstration. Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition.

(d) In order to demonstrate compliance with 40 CFR 61.52(b), the Permittee shall perform mercury (Hg) testing of the four (4) sewage sludge incinerators (I1 through I4) utilizing methods as approved by the Commissioner at least once every 3 years from the date of the most recent valid compliance demonstration. Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition.

(e) In order to demonstrate compliance with 40 CFR 60.4885, the Permittee shall perform PM, hydrogen chloride, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, lead, and fugitive emissions from ash handling, of the four (4) sewage sludge incinerators (I1 through I4) utilizing methods as approved by the Commissioner at least once every 3 years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition.

D.1.9 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 2-7-6(1),(6)][40 CFR 60]

(a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions) continuous emission monitoring systems for the four (4) sewage sludge incinerators (I1 through I4) shall be calibrated, maintained, and operated for measuring CO, which meet all applicable performance specifications of 326 IAC 3-5-2.

(b) All continuous emissions monitoring systems are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.

(c) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 3-5 and 40 CFR 60.

D.1.10 PM, SO2, CO, and HAP Control [326 IAC 2-7-5(1)]

(a) In order to assure compliance with Condition D.1.2(b) and D.1.4, the wet electrostatic precipitator (WESP) for PM and HAP control on each sewage sludge incinerator combusting sewage sludge shall be in operation at all times the incinerator on which the
WESP is installed is in operation.

(b) In order to assure compliance with Condition D.1.2(b) and D.1.3 the venturi scrubber for PM and SO2 control on each sewage sludge incinerator combusting sewage sludge shall be in operation incinerator at all times the incinerator on which the venturi scrubber is installed is in operation.

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

D.1.11 Continuous Emission Monitoring [326 IAC 3-5]

Pursuant to 326 IAC 3-5-1(b)(6) each sewage sludge incineration unit shall continuously monitor from the effluent gas exiting each of the incinerators (I1 through I4) the following:

(a) Total hydrocarbons, unless the following conditions are met:

(1) The exit gas from the sewage sludge incinerator stack is monitored continuously for carbon monoxide (CO).

(2) The monthly average concentration of CO in the exit gas from the sewage sludge incinerator stack, corrected for zero percent (0%) moisture and to seven percent (7%) oxygen, does not exceed one hundred (100) parts per million on a volumetric basis.

(b) Oxygen

(c) Moisture, unless an alternative method is approved by IDEM and U.S. EPA.

(d) Temperature

D.1.12 WESP Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

The Permittee shall comply with the following parametric monitoring requirements:

(a) The Permittee shall record the following for each WESP associated with an incinerator(s), when the associated incinerator(s) is in operation:

(1) Minimum power input to the electrostatic precipitator collection plants; and

(2) Minimum effluent water flow rate at the outlet of the electrostatic precipitator.

Data measurement, data recording, and data averaging period for compliance purposes shall be done in accordance with 40 CFR 60, Subpart LLLL, Table 3.

(b) The Permittee shall record the secondary voltage and the secondary amperage at least once per hour when the WESP is in operation. The product of the secondary voltage and the secondary amperage shall be the power input in watts. The Permittee shall record the power input at least once per hour. Compliance shall be determined using 12-hour block averages of the hourly records. The Permittee shall establish the minimum power input for each WESP based on the lowest 4-hour average during the most recent performance testing for PM and/or metals demonstrating compliance with the emissions limit for that unit. The Permittee shall take corrective action if the 12-hour block average power input for any WESP is below the minimum established during performance testing.

(c) The Permittee shall record the effluent water flow from the WESP at least once per hour when the associated incinerator is in operation. The Permittee shall establish the
minimum effluent water flow rate for each WESP based on the lowest 4-hour average during the most recent performance testing for PM and/or metals demonstrating compliance with the emissions limit for that unit. The Permittee shall take corrective action if the 12-hour block average effluent water flow rate for any WESP is below the minimum established during performance testing.

D.1.13 Activated Carbon Adsorber Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

The Permittee shall comply with the following parametric monitoring requirements:

- The Permittee shall record the pressure drop across the carbon adsorber associated with each of the incinerators (I1 through I4), at least once per day when the associated incinerator is in operation. When, for any one reading, the pressure drop across a carbon adsorber associated with an incinerator is outside the normal pressure drop range established during the latest stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure drop reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take reasonable response steps shall be considered a deviation from this permit.

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

D.1.14 Scrubber Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

(a) The Permittee shall monitor and record the flow rate of the scrubber at least once per fifteen (15) minute period when the associated incinerators are in operation. Compliance shall be based on 12-hour block averages.

(b) The Permittee shall establish the minimum liquid flow rate for each scrubber based on the lowest 4-hour average during the most recent performance testing for PM and/or SO2 demonstrating compliance with the emissions limit for that unit.

(c) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate as observed during the latest compliant stack test.

(d) When for any one reading, the flow rate is below the above mentioned minimum, the Permittee shall take a 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. A reading that is below the above mentioned minimum flow rate is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(e) The Permittee shall monitor and record the pressure drop across the scrubber at least once per fifteen (15) minute period when the associated processes are in operation. The Permittee shall establish the minimum pressure drop for each scrubber based on the lowest 4-hour average during the most recent performance testing for PM and/or SO2 demonstrating compliance with the emissions limit for that unit. Compliance shall be based on 12-hour block averages. When for any one reading, the pressure drop across a scrubber is below the minimum pressure drop, the Permittee shall take a 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. A pressure drop reading that is outside the above mentioned range(s) is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.
The instruments used for determining the pressure drop shall comply with Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.

The Permittee shall monitor and record the pH of the effluent from the scrubber at least once per fifteen (15) minute period when the associated incinerators are in operation. The Permittee shall establish the minimum pH of the effluent for each scrubber based on the lowest 1-hour average during the most recent performance testing for PM and/or SO2 demonstrating compliance with the emissions limit for that unit. Compliance shall be based on 3-hour block averages. When for any one reading, the pH across a scrubber is below the minimum pH, the Permittee shall take a reasonable response. The normal range for this unit is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. A pH reading that is outside the above mentioned range(s) is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

D.1.15 Regenerative Thermal Oxidizer (RTO) Temperature [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The Permittee shall comply with the following parametric monitoring requirements:

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the RTO control devices (RTO-1 through RTO-4) for measuring operating temperature. For the purpose of this condition, continuous means no less than once per fifteen (15) minutes. The output of this system shall be recorded as a 3-hour average.

(b) The Permittee shall determine the 3-hour average temperature from the latest valid stack test that demonstrates compliance with dioxin/furan limits in 40 CFR 60, Subpart LLLL.

(c) On and after the date the stack test results are available, the Permittee shall operate the RTOs at or above the 3-hour average temperature established during the latest compliant stack test any time the associated incinerator is in operation. If the 3-hour average temperature falls below the level established during the latest compliant stack test, the Permittee shall take reasonable response steps.

(d) Section C – Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the response steps required by this condition. A measured 3-hour average temperature below the 3-hour average temperature established as required by Condition D.1.14(b) is not a deviation from this permit. Failure to take reasonable response steps shall be considered a deviation from this permit.

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

D.1.16 Record Keeping Requirement

(a) To document the compliance status with Conditions D.1.1(a), D.1.2(a), and D.1.4(a), the Permittee shall maintain records of the total dry tons of sewage sludge incinerated for each of the incinerators (I1 through I4) each month and each compliance period.

(b) The Permittee shall record the output of the continuous monitoring system(s) pounds per ton of dry sludge burned and shall perform the required record keeping pursuant to
326 IAC 3-5-6 and 326 IAC 3-5-7.

(c) In the event that a breakdown of the continuous emission monitoring systems (CEMS) occurs, the Permittee shall maintain records of all CEMS malfunctions, out of control periods, calibration and adjustment activities, and repair or maintenance activities.

(d) To document the compliance status with Condition D.1.9, the Permittee shall maintain records of all continuous emissions monitoring data for a minimum of five (5) years, pursuant to 326 IAC 3-5-6, for each of the four (4) sewage sludge incinerators (I1 through I4).

(e) To document the compliance status with Condition D.1.13, the Permittee shall maintain daily records of pressure drop across the activated carbon adsorber. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(f) To document the compliance status with Conditions D.1.12, D.1.14, and D.1.15, the Permittee shall maintain all required records in accordance with 40 CFR 60.4910. The Permittee shall include in its daily record when the readings are not taken and the reason for the lack of the readings (e.g. the process did not operate that day).

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

D.1.17 Reporting Requirements

(a) A quarterly summary of the information to document the compliance status with D.1.1(a), D.1.2(a)(1), and 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.

(b) The Permittee shall prepare and submit to IDEM, OAQ a written report of the results of the calibration gas audits and relative accuracy test audits for each calendar quarter within thirty (30) calendar days after the end of each quarter. The report must contain the information required by 326 IAC 3-5-5(f).

(c) Pursuant to 326 IAC 3-5-7(5), reporting of continuous monitoring system instrument downtime shall include the following:

(1) date of downtime;
(2) time of commencement;
(3) duration of each downtime;
(4) reasons for each downtime; and
(5) nature of system repairs and adjustments.

(d) The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official,” as defined by 326 IAC 2-7-1(35).
SECTION D.2  EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(e) One (1) Stone Johnston Corp. natural gas boiler with serial number 843402, identified as B2, constructed in 1987, with a maximum heat input capacity of 12.6 million BTU per hour, using no controls, and exhausting to stack No. 09.

(f) One (1) Stone Johnston Corp. natural gas boiler with serial number 843403, identified as B3, constructed in 1987, with a maximum heat input capacity of 12.6 million BTU per hour, using no controls, and exhausting to stack No. 10.

Insignificant Activities:

(f) Space heaters, process heaters, heat treat furnaces, or boilers using natural gas fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.

(2) Four (4) natural gas fired hot water heaters, with a combined maximum heat input capacity of 1.1999 MMBtu/hr.

(3) Fourteen (14) natural gas fired make up air units, with a combined maximum heat input capacity of 14.132 MMBtu/hr.

(4) One (1) Landa natural gas fired power washer unit, with a maximum heat input capacity of 0.35 MMBtu/hr.

(5) Five (5) natural gas fired flue gas condensing boilers, identified as B1a through B1e, approved in 2018 for construction, with a maximum capacity of 2.0 MMBtu/hr each, using low NOx burners, and exhausting to stack 08.

(6) Two (2) natural gas fired boilers, each with a maximum heat input capacity of 0.505 MMBtu/hr.

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

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

D.2.1 Particulate Emissions [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from the following units shall be limited to Pt pounds per MMBtu heat input, as follows:

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Unit ID</th>
<th>Pt (lb/MBtu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boilers</td>
<td>B2 and B3</td>
<td>0.47</td>
</tr>
<tr>
<td>Insignificant Activities</td>
<td>N/A</td>
<td>0.41</td>
</tr>
<tr>
<td>Flue gas condensing boilers</td>
<td>B1a through B1e</td>
<td>0.39</td>
</tr>
</tbody>
</table>
D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for this facility. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.
SECTION D.3  EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

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

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

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

D.3.1 Cold Cleaner Degreaser Control Equipment and Operating Requirements [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and Operating Requirements), the Permittee shall:

(a) Ensure the following control equipment and operating requirements are met:

(1) Equip the degreaser with a cover.

(2) Equip the degreaser with a device for draining cleaned parts.

(3) Close the degreaser cover whenever parts are not being handled in the degreaser.

(4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(5) Provide a permanent, conspicuous label that lists the operating requirements in subdivisions (3), (4), (6), and (7).

(6) Store waste solvent only in closed containers.

(7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.

(b) Ensure the following additional control equipment and operating requirements are met:

(1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent used is insoluble in, and heavier than, water.

(C) A refrigerated chiller.

(D) Carbon adsorption.

(E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.

(2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.
If used, solvent spray:
(A) must be a solid, fluid stream; and
(B) shall be applied at a pressure that does not cause excessive splashing.

D.3.2 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]
Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers), the Permittee shall not operate a cold cleaning degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

D.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]
A Preventive Maintenance Plan is required for this facility. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

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

D.3.4 Record Keeping Requirements
(a) To document the compliance status with Condition D.3.3, the Permittee shall maintain the following records for each purchase of solvent used in the cold cleaner degreasing operations. These records shall be retained on-site or accessible electronically for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.

(1) The name and address of the solvent supplier.
(2) The date of purchase (or invoice/bill dates of contract servicer indicating service date).
(3) The type of solvent purchased.
(4) The total volume of the solvent purchased.
(5) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

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

Emissions Unit Description:

(c) Emergency diesel generators not exceed 1600 horsepower:

(2) One (1) diesel-fired emergency generator, identified as Generator-8, constructed in 2010, with a maximum output rating of 525 hp.

This unit is a new affected source under 40 CFR 60, Subpart III.
This unit is a new affected source under 40 CFR 63, Subpart ZZZZ.

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

E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart III.

(b) Pursuant to 40 CFR 60.4, 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 Stationary Compression Ignition Internal Combustion Engines NSPS [326 IAC 12] [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), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

(1) 40 CFR 60.4200(a)(2)(i) and (c);
(2) 40 CFR 60.4205(b);
(3) 40 CFR 60.4206;
(4) 40 CFR 60.4207(b);
(5) 40 CFR 60.4209(a);
(6) 40 CFR 60.4211(a), (c), (f)(1), (f)(2)(i), (f)(3) and (g)(3);
(7) 40 CFR 60.4212(a);
(8) 40 CFR 60.4214(b);
(9) 40 CFR 60.4218;
(10) 40 CFR 60.4219;
(11) Table 5 to Subpart III of Part 60; and
(12) Table 8 to Subpart IIII of Part 60;
### Emissions Unit Description:

#### (a) One (1) Nichols multiple hearth sewage sludge incinerator, identified as I1, constructed in 1970 and modified in 2014, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-1) for control of PM and metals, one (1) venturi wet scrubber (HFINSR301) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-1) for control of organics, and one (1) activated carbon adsorber (AC-1) for polishing of organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I1 with a capacity of 22.5 million Btu/hr total. A CEMS is used for CO.

This unit is a new affected source under 40 CFR 60, Subpart LLLL. This unit is an affected source under 40 CFR 61, Subpart C. This unit is an affected source under 40 CFR 61, Subpart E.

#### (b) One (1) Nichols multiple hearth sewage sludge incinerator, identified as I2, constructed in 1970 and rehabilitated in 2003, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-2) for control of PM and metals, one (1) venturi wet scrubber (HFINSR302) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-2) for control of organics, and one (1) activated carbon adsorber (AC-2) for polishing of organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I2, with a capacity of 22.5 Million BTU/hr total. A CEMS is used for CO.

This unit is a new affected source under 40 CFR 60, Subpart LLLL. This unit is an affected source under 40 CFR 61, Subpart C. This unit is an affected source under 40 CFR 61, Subpart E.

#### (c) One (1) Nichols multiple hearth sewage sludge incinerator, identified as I3, constructed in 1970 and modified in 2015, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-3) for control of PM and metals, one (1) venturi wet scrubber (HFINSR303) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-3) for control of organics, and one (1) activated carbon adsorber (AC-3) for polishing of organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I3 with a capacity of 22.5 million BTU/hr total. A CEMS is used for CO.

This unit is a new affected source under 40 CFR 60, Subpart LLLL. This unit is an affected source under 40 CFR 61, Subpart C. This unit is an affected source under 40 CFR 61, Subpart E.

#### (d) One (1) Nichols multiple hearth sewage sludge incinerator, identified as I4, constructed in 1970 and modified in 2015, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-4) for control of PM and metals, one (1) venturi wet scrubber (HFINSR304) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-4) for control of organics, and one (1) activated carbon adsorber (AC-4) for
polishing organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I4 with a capacity of 22.5 million BTU/hr total. A CEMS is used for CO.

This unit is a new affected source under 40 CFR 60, Subpart LLLL.
This unit is an affected source under 40 CFR 61, Subpart C.
This unit is an affected source under 40 CFR 61, Subpart E.

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

E.2.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart LLLL.

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

E.2.2 New Sewage Sludge Incinerators NSPS [326 IAC 12] [40 CFR Part 60, Subpart LLLL]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart LLLL (included as Attachment B to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

(1) 40 CFR 60.4760;
(2) 40 CFR 60.4765;
(3) 40 CFR 60.4770;
(4) 40 CFR 60.4775(a)(2);
(5) 40 CFR 60.4780;
(6) 40 CFR 60.4785;
(7) 40 CFR 60.4790;
(8) 40 CFR 60.4795;
(9) 40 CFR 60.4810;
(10) 40 CFR 60.4815;
(11) 40 CFR 60.4820;
(12) 40 CFR 60.4825;
(13) 40 CFR 60.4830;
(14) 40 CFR 60.4835;
(15) 40 CFR 60.4840;
(16) 40 CFR 60.4845;
(17) 40 CFR 60.4850(a), (b), (d), (e), (f), (g), and (h);
(18) 40 CFR 60.4855;
(19) 40 CFR 60.4860;
(20) 40 CFR 60.4861;
(21) 40 CFR 60.4870;
(22) 40 CFR 60.4880(a), (c), (d), (e), and (h);
(23) 40 CFR 60.4885;
(24) 40 CFR 60.4890;
(25) 40 CFR 60.4895;
(26) 40 CFR 60.4900;
(27) 40 CFR 60.4905;
(28) 40 CFR 60.4910;
(29) 40 CFR 60.4915;
(30) 40 CFR 60.4920;
(31) 40 CFR 60.4930;
(32) Table 2 to Subpart LLLL of Part 60;
(33) Table 3 to Subpart LLLL of Part 60;
(34) Table 4 to Subpart LLLL of Part 60;
(35) Table 5 to Subpart LLLL of Part 60;
### Emissions Unit Description:

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(a)</strong> One (1) Nichols multiple hearth sewage sludge incinerator, identified as I1, constructed in 1970 and modified in 2014, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-1) for control of PM and metals, one (1) venturi wet scrubber (HFINSR301) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-1) for control of organics, and one (1) activated carbon adsorber (AC-1) for polishing of organics, and exhausting to stack No. 01. Nine (9) natural gas fired auxiliary low NOx burners also included as I1 with a capacity of 22.5 million Btu/hr total. A CEMS is used for CO. This unit is a new affected source under 40 CFR 60, Subpart LLLL. This unit is an affected source under 40 CFR 61, Subpart C. This unit is an affected source under 40 CFR 61, Subpart E.</td>
</tr>
<tr>
<td><strong>(b)</strong> One (1) Nichols multiple hearth sewage sludge incinerator, identified as I2, constructed in 1970 and rehabilitated in 2003, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-2) for control of PM and metals, one (1) venturi wet scrubber (HFINSR302) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-2) for control of organics, and one (1) activated carbon adsorber (AC-2) for polishing of organics, and exhausting to stack No. 01. Nine (9) natural gas fired auxiliary low NOx burners also included as I2, with a capacity of 22.5 Million BTU/hr total. A CEMS is used for CO. This unit is a new affected source under 40 CFR 60, Subpart LLLL. This unit is an affected source under 40 CFR 61, Subpart C. This unit is an affected source under 40 CFR 61, Subpart E.</td>
</tr>
<tr>
<td><strong>(c)</strong> One (1) Nichols multiple hearth sewage sludge incinerator, identified as I3, constructed in 1970 and modified in 2015, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-3) for control of PM and metals, one (1) venturi wet scrubber (HFINSR303) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-3) for control of organics, and one (1) activated carbon adsorber (AC-3) for polishing of organics, and exhausting to stack No. 01. Nine (9) natural gas fired auxiliary low NOx burners also included as I3 with a capacity of 22.5 million BTU/hr total. A CEMS is used for CO. This unit is a new affected source under 40 CFR 60, Subpart LLLL. This unit is an affected source under 40 CFR 61, Subpart C. This unit is an affected source under 40 CFR 61, Subpart E.</td>
</tr>
<tr>
<td><strong>(d)</strong> One (1) Nichols multiple hearth sewage sludge incinerator, identified as I4, constructed in 1970 and modified in 2015, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-4) for control of PM and metals, one (1) venturi wet scrubber (HFINSR304) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-4) for control of organics, and one (1) activated carbon adsorber (AC-4) for...</td>
</tr>
</tbody>
</table>
polishing organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I4 with a capacity of 22.5 million BTU/hr total. A CEMS is used for CO.

This unit is a new affected source under 40 CFR 60, Subpart LLLL.
This unit is an affected source under 40 CFR 61, Subpart C.
This unit is an affected source under 40 CFR 61, Subpart E.

(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 2-7-5(1)]


(a) Pursuant to 40 CFR 61.01 the Permittee shall comply with the provisions of 40 CFR Part 61, 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 61, Subpart C.

(b) Pursuant to 40 CFR 61.01, 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.3.2 Beryllium NESHAP [40 CFR Part 61, Subpart C] [326 IAC 14-3]
The Permittee shall comply with the following provisions of 40 CFR Part 61, Subpart C (included as Attachment C to the operating permit), which are incorporated by reference as 326 IAC 14-3, for the emission unit(s) listed above:

(1) 40 CFR 61.30;
(2) 40 CFR 61.31;
(3) 40 CFR 61.32(a);
### Emissions Unit Description:

| (a) | One (1) Nichols multiple hearth sewage sludge incinerator, identified as I1, constructed in 1970 and modified in 2014, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-1) for control of PM and metals, one (1) venturi wet scrubber (HFINSR301) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-1) for control of organics, and one (1) activated carbon adsorber (AC-1) for polishing of organics, and exhausting to stack No. 01. Nine (9) natural gas fired auxiliary low NOx burners also included as I1 with a capacity of 22.5 million Btu/hr total. A CEMS is used for CO. This unit is a new affected source under 40 CFR 60, Subpart LLLL. This unit is an affected source under 40 CFR 61, Subpart C. This unit is an affected source under 40 CFR 61, Subpart E. |
| (b) | One (1) Nichols multiple hearth sewage sludge incinerator, identified as I2, constructed in 1970 and rehabilitated in 2003, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-2) for control of PM and metals, one (1) venturi wet scrubber (HFINSR302) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-2) for control of organics, and one (1) activated carbon adsorber (AC-2) for polishing of organics, and exhausting to stack No. 01. Nine (9) natural gas fired auxiliary low NOx burners also included as I2, with a capacity of 22.5 Million BTU/hr total. A CEMS is used for CO. This unit is a new affected source under 40 CFR 60, Subpart LLLL. This unit is an affected source under 40 CFR 61, Subpart C. This unit is an affected source under 40 CFR 61, Subpart E. |
| (c) | One (1) Nichols multiple hearth sewage sludge incinerator, identified as I3, constructed in 1970 and modified in 2015, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-3) for control of PM and metals, one (1) venturi wet scrubber (HFINSR303) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-3) for control of organics, and one (1) activated carbon adsorber (AC-3) for polishing of organics, and exhausting to stack No. 01. Nine (9) natural gas fired auxiliary low NOx burners also included as I3 with a capacity of 22.5 million BTU/hr total. A CEMS is used for CO. This unit is a new affected source under 40 CFR 60, Subpart LLLL. This unit is an affected source under 40 CFR 61, Subpart C. This unit is an affected source under 40 CFR 61, Subpart E. |
| (d) | One (1) Nichols multiple hearth sewage sludge incinerator, identified as I4, constructed in 1970 and modified in 2015, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-4) for control of PM and metals, one (1) venturi wet scrubber (HFINSR304) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-4) for control of organics, and one (1) activated carbon adsorber (AC-4) for polishing organics, and exhausting to stack No. 01. |
Nine (9) natural gas fired auxiliary low NOx burners also included as I4 with a capacity of 22.5 million BTU/hr total. A CEMS is used for CO.

This unit is a new affected source under 40 CFR 60, Subpart LLLL.
This unit is an affected source under 40 CFR 61, Subpart C.
This unit is an affected source under 40 CFR 61, Subpart E.

(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 2-7-5(1)]


(a) Pursuant to 40 CFR 61.01 the Permittee shall comply with the provisions of 40 CFR Part 61, 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 61, Subpart E.

(b) Pursuant to 40 CFR 61.01, the Permittee shall submit all required notifications and reports to:

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

E.4.2 Mercury NESHAP [40 CFR Part 61, Subpart E] [326 IAC 14-5]

The Permittee shall comply with the following provisions of 40 CFR Part 61, Subpart E (included as Attachment D to the operating permit), which are incorporated by reference as 326 IAC 14-5, for the emission unit(s) listed above:

(1) 40 CFR 61.50;
(2) 40 CFR 61.51;
(3) 40 CFR 61.52(b);
SECTION E.5

NESHAP

**Emissions Unit Description:**

(c) Emergency diesel generators not exceed 1600 horsepower:

(1) One (1) diesel-fired emergency generator, identified as Generator-1, constructed in 1988, with a maximum output rating of 480 hp.

This unit is an existing affected source under 40 CFR 63, Subpart ZZZZ.

(2) One (1) diesel-fired emergency generator, identified as Generator-8, constructed in 2010, with a maximum output rating of 525 hp.

This unit is a new affected source under 40 CFR 60, Subpart IIII.

This unit is a new affected source under 40 CFR 63, Subpart ZZZZ.

(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 2-7-5(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 ZZZZ.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

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

E.5.2 Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment E to the operating permit), which are incorporated by reference as 326 IAC 20-82,

(a) The diesel emergency generator (Generator-1):

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

(b) The diesel emergency generator (Generator-8):

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(2)(iii) and (c)(1)
(4) 40 CFR 63.6595(a)(7)
(5) 40 CFR 63.6665
(6) 40 CFR 63.6670
(7) 40 CFR 63.6675
SECTION E.6  NESHAP

Emissions Unit Description:

(g) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, vehicles, having a storage capacity less than or equal to 10,500 gallons. Such storage tanks may be in a fixed location or on mobile equipment.

(1) One (1) gasoline storage tank, identified as Tank 029, with a maximum capacity of 10,000 gallons, and a throughput of 58,000 gallons per year.

(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 2-7-5(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 CCCCCC.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

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

E.6.2 Source Category: Gasoline Dispensing Facilities NESHAP [40 CFR Part 63, Subpart CCCCCC]

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

(1) 40 CFR 63.11110;
(2) 40 CFR 63.11111(a), (b), (e), (f), (h), (i), and (j);
(3) 40 CFR 63.11112;
(4) 40 CFR 63.11113(b), (c), and (f)(1);
(4) 40 CFR 63.11115;
(5) 40 CFR 63.11116;
(6) 40 CFR 63.11125(d);
(7) 40 CFR 63.11130;
(8) 40 CFR 63.11131;
(9) 40 CFR 63.11132;
(10) Table 3
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant
Source Address: 2700 South Belmont Avenue, Indianapolis, Indiana 46221
Part 70 Permit No.: T097-40933-00032

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:
Phone:
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

Part 70 Operating Permit
Emergency Occurrence Report

Source Name: CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant
Source Address: 2700 South Belmont Avenue, Indianapolis, Indiana 46221
Part 70 Permit No.: T097-40933-00032

This form consists of 2 pages

☐ This is an emergency as defined in 326 IAC 2-7-1(12)
  • The Permittee must notify the Office of Air Quality (OAQ), within four (4) daytime
    business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
  • The Permittee must submit notice in writing or by facsimile within two (2) working days
    (Facsimile Number: 317-233-6865), and follow the other requirements of
    326 IAC 2-7-16.

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

<table>
<thead>
<tr>
<th>Facility/Equipment/Operation:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Control Equipment:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Permit Condition or Operation Limitation in Permit:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Description of the Emergency:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Describe the cause of the Emergency:</th>
</tr>
</thead>
</table>
If any of the following are not applicable, mark N/A

<table>
<thead>
<tr>
<th>Date/Time Emergency started:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date/Time Emergency was corrected:</td>
</tr>
<tr>
<td>Was the facility being properly operated at the time of the emergency?</td>
</tr>
<tr>
<td>Type of Pollutants Emitted: TSP, PM-10, SO₂, VOC, NOₓ, CO, Pb, other:</td>
</tr>
<tr>
<td>Estimated amount of pollutant(s) emitted during emergency:</td>
</tr>
<tr>
<td>Describe the steps taken to mitigate the problem:</td>
</tr>
<tr>
<td>Describe the corrective actions/response steps taken:</td>
</tr>
<tr>
<td>Describe the measures taken to minimize emissions:</td>
</tr>
</tbody>
</table>

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:_______________________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant
Source Address: 2700 South Belmont Avenue, Indianapolis, Indiana 46221
Part 70 Permit No.: T097-40933-00032
Facility: Incinerators I1 through I4
Parameter: Sewage Sludge Incinerated
Limit: The total amount of sewage sludge incinerated by all the incinerators (I1 through I4), shall not exceed 62,050 dry tons of sludge per twelve (12) consecutive month period, with compliance determined at the end of each month.

<table>
<thead>
<tr>
<th>QUARTER :</th>
<th>YEAR :</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This Month (tons)</td>
<td>Previous 11 Months (tons)</td>
<td>12 Month Total (tons)</td>
</tr>
<tr>
<td></td>
<td></td>
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</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: ___________________________________________________
Indiana Department of Environmental Management  
Office of Air Quality  
Compliance and Enforcement Branch

Part 70 Quarterly Report

Source Name: CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant  
Source Address: 2700 South Belmont Avenue, Indianapolis, Indiana 46221  
Part 70 Permit No.: T097-40933-00032  
Facility: Incinerators I2  
Parameter: Sewage Sludge Incinerated  
Limit: The amount of dry sludge delivered to the No. 2 Incinerator shall be limited to less than 17,712 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

<table>
<thead>
<tr>
<th>QUARTER</th>
<th>YEAR</th>
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</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1 (tons)</th>
<th>Column 2 (tons)</th>
<th>Column 1 + Column 2 (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Month</td>
<td>Previous 11 Months</td>
<td>12 Month Total</td>
<td></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:  

[Table with columns for This Month, Previous 11 Months, and 12 Month Total]
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

<table>
<thead>
<tr>
<th>Permit Requirement</th>
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<th>Duration of Deviation</th>
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<tbody>
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<td></td>
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<tr>
<td>Probable Cause of Deviation:</td>
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<tr>
<td>Response Steps Taken:</td>
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<td>Response Steps Taken:</td>
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<tr>
<td>Permit Requirement (specify permit condition #)</td>
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<td>Probable Cause of Deviation:</td>
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<td>Response Steps Taken:</td>
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<tr>
<td>Response Steps Taken:</td>
<td></td>
</tr>
</tbody>
</table>

Form Completed by: ________________________________

Title / Position: ________________________________

Date: ________________________________

Phone: ________________________________
Attachment A

Part 70 Operating Permit No: 097-40933-00032

[Downloaded from the eCFR on September 6, 2016]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart III—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Source: 71 FR 39172, July 11, 2006, unless otherwise noted.

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-hour (g/HP-hr)) when maximum engine speed is less than 130 revolutions per minute (rpm);

(ii) $45 \cdot n^{-0.2} \text{ g/KW-hr (34} \cdot n^{-0.2} \text{ g/HP-hr)}$ when maximum engine speed is 130 or more but less than 2,000 rpm, where $n$ is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012 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) $44 \cdot n^{-0.23} \text{ g/KW-hr (33} \cdot n^{-0.23} \text{ g/HP-hr)}$ when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where $n$ is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) 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) $9.0 \cdot n^{-0.20} \text{ g/KW-hr (6.7} \cdot n^{-0.20} \text{ g/HP-hr)}$ 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 CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

(e) Owners and operators of emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the NTE standards as indicated in §60.4212.

(f) Owners and operators of any modified or reconstructed emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed CI ICE that are specified in paragraphs (a) through (e) of this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 over the entire life of the engine.

[76 FR 37969, June 28, 2011]

Fuel Requirements for Owners and Operators

§60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

(c) [Reserved]

(d) Beginning June 1, 2012, owners and operators of stationary CI ICE subject to this subpart with a displacement of greater than or equal to 30 liters per cylinder are no longer subject to the requirements of paragraph (a) of this section, and must use fuel that meets a maximum per-gallon sulfur content of 1,000 parts per million (ppm).

(e) Stationary CI ICE that have a national security exemption under §60.4200(d) are also exempt from the fuel requirements in this section.


Other Requirements for Owners and Operators

§60.4208 What is the deadline for importing or installing stationary CI ICE produced in previous model years?

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.
(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) After December 31, 2018, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power greater than or equal to 600 KW (804 HP) and less than 2,000 KW (2,680 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that do not meet the applicable requirements for 2017 model year non-emergency engines.

(h) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (g) of this section after the dates specified in paragraphs (a) through (g) of this section.

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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]
Compliance Requirements

§60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of less than 10 liters per cylinder to the emission standards specified in §60.4201(a) through (c) and §60.4202(a), (b) and (d) using the certification procedures required in 40 CFR part 89, subpart B, or 40 CFR part 1039, subpart C, as applicable, and must test their engines as specified in those parts. For the purposes of this subpart, engines certified to the standards in table 1 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89. For the purposes of this subpart, engines certified to the standards in table 4 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89, except that engines with NFPA nameplate power of less than 37 KW (50 HP) certified to model year 2011 or later standards shall be subject to the same requirements as engines certified to the standards in 40 CFR part 1039.

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in §60.4201(d) and (e) and §60.4202(e) and (f) using the certification procedures required in 40 CFR part 94, subpart C, or 40 CFR part 1042, subpart C, as applicable, and must test their engines as specified in 40 CFR part 94 or 1042, as applicable.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 1039.125, 1039.130, and 1039.135, and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 89, 40 CFR part 94 or 40 CFR part 1042 for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

(1) Stationary CI internal combustion engines manufactured from January 1, 2006 to March 31, 2006 (January 1, 2006 to June 30, 2006 for fire pump engines), other than those that are part of certified engine families under the nonroad CI engine regulations, must be labeled according to 40 CFR 1039.20.

(2) Stationary CI internal combustion engines manufactured from April 1, 2006 to December 31, 2006 (or, for fire pump engines, July 1, 2006 to December 31 of the year preceding the year listed in table 3 to this subpart) must be labeled according to paragraphs (c)(2)(i) through (iii) of this section:

(i) Stationary CI internal combustion engines that are part of certified engine families under the nonroad regulations must meet the labeling requirements for nonroad CI engines, but do not have to meet the labeling requirements in 40 CFR 1039.20.

(ii) Stationary CI internal combustion engines that meet Tier 1 requirements (or requirements for fire pumps) under this subpart, but do not meet the requirements applicable to nonroad CI engines must be labeled according to 40 CFR 1039.20. The engine manufacturer may add language to the label clarifying that the engine meets Tier 1 requirements (or requirements for fire pumps) of this subpart.

(iii) Stationary CI internal combustion engines manufactured after April 1, 2006 that do not meet Tier 1 requirements of this subpart, or fire pumps engines manufactured after July 1, 2006 that do not meet the requirements for fire pumps under this subpart, may not be used in the U.S. If any such engines are manufactured in the U.S. after April 1, 2006 (July 1, 2006 for fire pump engines), they must be exported or must be brought into compliance with the appropriate standards prior to initial operation. The export provisions of 40 CFR 1068.230 would apply to engines for export and the manufacturers must label such engines according to 40 CFR 1068.230.

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.
(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding
requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to
the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the
standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled
according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate, but the words “stationary” must be
included instead of “nonroad” or “marine” on the label. In addition, such engines must be labeled according to 40 CFR
1039.20.

(iii) Stationary CI internal combustion engines that do not meet the requirements of this subpart must be labeled
according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230.

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to
standards applicable under 40 CFR parts 89, 94, 1039 or 1042 for that model year may certify any such family that
contains both nonroad (including marine) and stationary engines as a single engine family and/or may include any
such family containing stationary engines in the averaging, banking and trading provisions applicable for such
engines under those parts.

(e) Manufacturers of engine families discussed in paragraph (d) of this section may meet the labeling requirements
referred to in paragraph (c) of this section for stationary CI ICE by either adding a separate label containing the
information required in paragraph (c) of this section or by adding the words “and stationary” after the word “nonroad”
or “marine,” as appropriate, to the label.

(f) Starting with the model years shown in table 5 to this subpart, stationary CI internal combustion engine
manufacturers must add a permanent label stating that the engine is for stationary emergency use only to each new
emergency stationary CI internal combustion engine greater than or equal to 19 KW (25 HP) that meets all the
emission standards for emergency engines in §60.4202 but does not meet all the emission standards for non-
emergency engines in §60.4201. The label must be added according to the labeling requirements specified in 40
CFR 1039.135(b). Engine manufacturers must specify in the owner’s manual that operation of emergency engines is
limited to emergency operations and required maintenance and testing.

(g) Manufacturers of fire pump engines may use the test cycle in table 6 to this subpart for testing fire pump engines
and may test at the NFPA certified nameplate HP, provided that the engine is labeled as “Fire Pump Applications
Only”.

(h) Engine manufacturers, including importers, may introduce into commerce uncertified engines or engines certified
to earlier standards that were manufactured before the new or changed standards took effect until inventories are
depleted, as long as such engines are part of normal inventory. For example, if the engine manufacturers’ normal
industry practice is to keep on hand a one-month supply of engines based on its projected sales, and a new tier of
standards starts to apply for the 2009 model year, the engine manufacturer may manufacture engines based on the
normal inventory requirements late in the 2008 model year, and sell those engines for installation. The engine
manufacturer may not circumvent the provisions of §60.4201 or §60.4202 by stockpiling engines that are built before
new or changed standards take effect. Stockpiling of such engines beyond normal industry practice is a violation of
this subpart.

(i) The replacement engine provisions of 40 CFR 89.1003(b)(7), 40 CFR 94.1103(b)(3), 40 CFR 94.1103(b)(4) and 40
CFR 1068.240 are applicable to stationary CI engines replacing existing equipment that is less than 15 years old.

(j) Stationary CI ICE manufacturers may equip their stationary CI internal combustion engines certified to the
emission standards in 40 CFR part 1039 with 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 NO\textsubscript{x} 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 NO\textsubscript{x} 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:

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

Where:

\( \text{STD} = \text{The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.} \)

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112
or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year
engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to
the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c),
determined from the equation in paragraph (c) of this section.

Where:

\( \text{STD} = \text{The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c).} \)

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in
§60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.
(e) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1042 must not exceed the NTE standards for the same model year and maximum engine power as required in 40 CFR 1042.101(c).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

§60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must conduct performance tests according to paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted according to the requirements in §60.8 and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c).

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must last at least 1 hour.

(d) To determine compliance with the percent reduction requirement, you must follow the requirements as specified in paragraphs (d)(1) through (3) of this section.

(1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

\[
\frac{C_i - C_o}{C_i} \times 100 = R \quad \text{(Eq. 2)}
\]

Where:

\( C_i \) = concentration of NO\(_X\) or PM at the control device inlet,

\( C_o \) = concentration of NO\(_X\) or PM at the control device outlet, and

\( R \) = percent reduction of NO\(_X\) or PM emissions.

(2) You must normalize the NO\(_X\) or PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O\(_2\)) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO\(_2\)) using the procedures described in paragraph (d)(3) of this section.

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

Where:

\( C_{\text{adj}} \) = Calculated NO\(_X\) or PM concentration adjusted to 15 percent O\(_2\).

\( C_d \) = Measured concentration of NO\(_X\) or PM, uncorrected.

5.9 = 20.9 percent O\(_2\)−15 percent O\(_2\), the defined O\(_2\) 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:

\[
F₀ = \frac{0.209 F_d}{F_c} \quad (\text{Eq. 4})
\]

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.

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

\(F_c\) = Ratio of the volume of CO₂ produced to the gross calorific value of the fuel from Method 19, dsm³/J (dscf/10⁶ Btu).

(ii) Calculate the CO₂ correction factor for correcting measurement data to 15 percent O₂, as follows:

\[
X_{\text{CO₂}} = \frac{5.9}{F₀} \quad (\text{Eq. 5})
\]

Where:

\(X_{\text{CO₂}}\) = 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:

\[
C_{\text{adj}} = C_d \frac{X_{\text{CO₂}}}{\%\text{CO₂}} \quad (\text{Eq. 6})
\]

Where:

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

\(C_d\) = Measured concentration of NOₓ or PM, uncorrected.

\(\%\text{CO₂}\) = 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:
Where:

\[
ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{\text{KW-hour}} \quad \text{(Eq. 7)}
\]

ER = Emission rate in grams per KW-hour.

\(C_d\) = Measured NO\(_X\) concentration in ppm.

\[1.912 \times 10^{-3}\] = Conversion constant for ppm NO\(_X\) to grams per standard cubic meter at 25 degrees Celsius.

\(Q\) = Stack gas volumetric flow rate, in standard cubic meter per hour.

\(T\) = Time of test run, in hours.

\(\text{KW-hour}\) = Brake work of the engine, in KW-hour.

(f) To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

\[
ER = \frac{C_{adj} \times Q \times T}{\text{KW-hour}} \quad \text{(Eq. 8)}
\]

Where:

ER = Emission rate in grams per KW-hour.

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

\(Q\) = Stack gas volumetric flow rate, in standard cubic meter per hour.

\(T\) = Time of test run, in hours.

\(\text{KW-hour}\) = Energy output of the engine, in KW.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

Notification, Reports, and Records for Owners and Operators

§60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 KW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 KW (175 HP) and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) Submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (a)(1)(i) through (v) of this section.

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

(ii) The address of the affected source;
(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

(2) Keep records of the information in paragraphs (a)(2)(i) through (iv) of this section.

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

(ii) Maintenance conducted on the engine.

(iii) If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

(iv) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

(d) If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in §60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (d)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

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

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §60.4211(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purposes specified in §60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.
(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA’s Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §60.4.

(e) Owners or operators of stationary CI ICE equipped with AECDs pursuant to the requirements of 40 CFR 1039.665 must report the use of AECDs as required by 40 CFR 1039.665(e).


Special Requirements

§60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

(a) Stationary CI ICE with a displacement of less than 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §§60.4202 and 60.4205.

(b) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in §60.4207.

(c) Stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the following emission standards:

(1) For engines installed prior to January 1, 2012, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $45 \cdot n^{-0.2} \text{g/KW-hr}$ ($34 \cdot n^{-0.2} \text{g/HP-hr}$) when maximum engine speed is 130 or more but less than 2,000 rpm, where $n$ is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23} \text{g/KW-hr}$ ($33 \cdot n^{-0.23} \text{g/HP-hr}$) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where $n$ is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]
§60.4216 What requirements must I meet for engines used in Alaska?

(a) Prior to December 1, 2010, owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder located in areas of Alaska not accessible by the FAHS should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

(b) Except as indicated in paragraph (c) of this section, manufacturers, owners and operators of stationary CI ICE with a displacement of less than 10 liters per cylinder located in remote areas of Alaska may meet the requirements of this subpart by manufacturing and installing engines meeting the requirements of 40 CFR parts 94 or 1042, as appropriate, rather than the otherwise applicable requirements of 40 CFR parts 89 and 1039, as indicated in §§60.4201(f) and 60.4202(g).

(c) Manufacturers, owners and operators of stationary CI ICE that are located in remote areas of Alaska may choose to meet the applicable emission standards for emergency engines in §§60.4202 and 60.4205, and not those for non-emergency engines in §§60.4201 and 60.4204, except that for 2014 model year and later non-emergency CI ICE, the owner or operator of any such engine that was not certified as meeting Tier 4 PM standards, must meet the applicable requirements for PM in §§60.4201 and 60.4204 or install a PM emission control device that achieves PM emission reductions of 85 percent, or 60 percent for engines with a displacement of greater than or equal to 30 liters per cylinder, compared to engine-out emissions.

(d) The provisions of §60.4207 do not apply to owners and operators of pre-2014 model year stationary CI ICE subject to this subpart that are located in remote areas of Alaska.

(e) The provisions of §60.4208(a) do not apply to owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS until after December 31, 2009.

(f) The provisions of this section and §60.4207 do not prevent owners and operators of stationary CI ICE subject to this subpart that are located in remote areas of Alaska from using fuels mixed with used lubricating oil, in volumes of up to 1.75 percent of the total fuel. The sulfur content of the used lubricating oil must be less than 200 parts per million. The used lubricating oil must meet the on-specification levels and properties for used oil in 40 CFR 279.11.

[76 FR 37971, June 28, 2011, as amended at 81 FR 44219, July 7, 2016]

§60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?

Owners and operators of stationary CI ICE that do not use diesel fuel may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in §§60.4204 or §60.4205 using such fuels and that use of such fuel is appropriate and reasonably necessary, considering cost, energy, technical feasibility, human health and environmental, and other factors, for the operation of the engine.

[76 FR 37972, June 28, 2011]

General Provisions

§60.4218 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.
Definitions

§60.4219 What definitions apply to this subpart?

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

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for certified emissions life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

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

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

Date of manufacture means one of the following things:

(1) For freshly manufactured engines and modified engines, date of manufacture means the date the engine is originally produced.

(2) For reconstructed engines, date of manufacture means the date the engine was originally produced, except as specified in paragraph (3) of this definition.

(3) Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

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

Diesel particulate filter means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

Emergency stationary internal combustion engine means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in §60.4211(f) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in §60.4211(f), then it is not considered to be an emergency stationary ICE under this subpart.

(1) The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied
to portions of a facility when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc.

(2) The stationary ICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §60.4211(f).

(3) The stationary ICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §60.4211(f)(2)(ii) or (iii) and §60.4211(f)(3)(i).

**Engine manufacturer** means the manufacturer of the engine. See the definition of “manufacturer” in this section.

**Fire pump engine** means an emergency stationary internal combustion engine certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.

**Freshly manufactured engine** means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced.

**Installed** means the engine is placed and secured at the location where it is intended to be operated.

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

**Maximum engine power** means maximum engine power as defined in 40 CFR 1039.801.

**Model year** means the calendar year in which an engine is manufactured (see “date of manufacture”), except as follows:

(1) Model year means the annual new model production period of the engine manufacturer in which an engine is manufactured (see “date of manufacture”), if the annual new model production period is different than the calendar year and includes January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year.

(2) For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was manufactured (see “date of manufacture”).

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

**Reciprocating internal combustion engine** means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work.

**Remote areas of Alaska** means areas of Alaska that meet either paragraph (1) or (2) of this definition.

(1) Areas of Alaska that are not accessible by the Federal Aid Highway System (FAHS).

(2) Areas of Alaska that meet all of the following criteria:

(i) The only connection to the FAHS is through the Alaska Marine Highway System, or the stationary CI ICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary CI ICE on an annual basis is used for residential purposes.
(iii) The generating capacity of the source is less than 12 megawatts, or the stationary CI ICE is used exclusively for backup power for renewable energy.

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

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

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

*Subpart* means 40 CFR part 60, subpart III.


**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></td>
<td>HC</td>
</tr>
<tr>
<td>KW&lt;8 (HP&lt;11)</td>
<td>10.5 (7.8)</td>
</tr>
<tr>
<td>8≤KW&lt;19 (11≤HP&lt;25)</td>
<td>9.5 (7.1)</td>
</tr>
<tr>
<td>19≤KW&lt;37 (25≤HP&lt;50)</td>
<td>9.5 (7.1)</td>
</tr>
<tr>
<td>37≤KW&lt;56 (50≤HP&lt;75)</td>
<td>9.2 (6.9)</td>
</tr>
<tr>
<td>56≤KW&lt;75 (75≤HP&lt;100)</td>
<td>9.2 (6.9)</td>
</tr>
<tr>
<td>75≤KW&lt;130 (100≤HP&lt;175)</td>
<td>9.2 (6.9)</td>
</tr>
<tr>
<td>130≤KW&lt;225 (175≤HP&lt;300)</td>
<td>1.3 (1.0)</td>
</tr>
<tr>
<td>225≤KW&lt;450 (300≤HP&lt;600)</td>
<td>1.3 (1.0)</td>
</tr>
</tbody>
</table>
Table 2 to Subpart 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>NOx + NMHC</th>
<th>CO</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>KW&lt;8 (HP&lt;11)</td>
<td>7.5 (5.6)</td>
<td>8.0 (6.0)</td>
<td>0.40 (0.30)</td>
</tr>
<tr>
<td>8≤KW&lt;19 (11≤HP&lt;25)</td>
<td>7.5 (5.6)</td>
<td>6.6 (4.9)</td>
<td>0.40 (0.30)</td>
</tr>
<tr>
<td>19≤KW&lt;37 (25≤HP&lt;50)</td>
<td>7.5 (5.6)</td>
<td>5.5 (4.1)</td>
<td>0.30 (0.22)</td>
</tr>
</tbody>
</table>

Table 3 to Subpart 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 III 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></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></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></td>
<td>0.30 (0.22)</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></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></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></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></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></td>
<td>0.20 (0.15)</td>
</tr>
<tr>
<td>450≤KW&lt;560 (600≤HP≤750)</td>
<td>2008 and earlier</td>
<td>10.5 (7.8)</td>
<td>3.5 (2.6)</td>
<td>0.54 (0.40)</td>
</tr>
<tr>
<td></td>
<td>2009 +</td>
<td>4.0 (3.0)</td>
<td></td>
<td>0.20 (0.15)</td>
</tr>
<tr>
<td>KW&gt;560 (HP&gt;750)</td>
<td>2007 and earlier</td>
<td>10.5 (7.8)</td>
<td>3.5 (2.6)</td>
<td>0.54 (0.40)</td>
</tr>
<tr>
<td></td>
<td>2008 +</td>
<td>6.4 (4.8)</td>
<td></td>
<td>0.20 (0.15)</td>
</tr>
</tbody>
</table>

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 III 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 III of Part 60—Optional 3-Mode Test Cycle for Stationary Fire Pump Engines

[As stated in §60.4210(g), manufacturers of fire pump engines may use the following test cycle for testing fire pump engines:]

<table>
<thead>
<tr>
<th>Mode No.</th>
<th>Engine speed¹</th>
<th>Torque (percent)²</th>
<th>Weighting factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rated</td>
<td>100</td>
<td>0.30</td>
</tr>
<tr>
<td>2</td>
<td>Rated</td>
<td>75</td>
<td>0.50</td>
</tr>
<tr>
<td>3</td>
<td>Rated</td>
<td>50</td>
<td>0.20</td>
</tr>
</tbody>
</table>

¹Engine speed: ±2 percent of point.

²Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.
Table 7 to Subpart III of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥30 Liters per Cylinder

As stated in §60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥30 liters per cylinder:

<table>
<thead>
<tr>
<th>Each</th>
<th>Complying with the requirement to</th>
<th>You must</th>
<th>Using</th>
<th>According to the following requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Stationary CI internal combustion engine with a displacement of ≥ 30 liters per cylinder</td>
<td>a. Reduce NO\textsubscript{X} 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 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-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></td>
<td></td>
<td></td>
<td>(b) Measurements to determine O\textsubscript{2} concentration must be made at the same time as the measurements for NO\textsubscript{X} 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 NO\textsubscript{X} concentration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></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>
</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></td>
<td>b. Limit the concentration of NOx 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 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 (&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-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></td>
<td>ii. Determine the O2 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 O2 concentration must be made at the same time as the measurement for NOx concentration.</td>
</tr>
<tr>
<td></td>
<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 NOx concentration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iv. Measure NOx 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) NOx concentration must be at 15 percent O2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.</td>
</tr>
<tr>
<td></td>
<td>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>
</tr>
</tbody>
</table>
Each requirement must be complied with using the following methods:

<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></td>
<td>ii. Measure $O_2$ 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 $O_2$ concentration must be made at the same time as the measurements for PM concentration.</td>
<td></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>
<td></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 $O_2$, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.</td>
<td></td>
</tr>
<tr>
<td></td>
<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></td>
<td>ii. Determine the $O_2$ 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 $O_2$ concentration must be made at the same time as the measurements for PM concentration.</td>
</tr>
<tr>
<td></td>
<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></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 $O_2$, 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>
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<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>
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<td>-----------------------------</td>
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<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>
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<tr>
<td>§60.9</td>
<td>Availability of information</td>
<td>Yes</td>
<td></td>
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<tr>
<td>§60.10</td>
<td>State Authority</td>
<td>Yes</td>
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<tr>
<td>§60.11</td>
<td>Compliance with standards and maintenance</td>
<td>No</td>
<td>Requirements are specified in subpart III.</td>
</tr>
<tr>
<td>§60.12</td>
<td>Circumvention</td>
<td>Yes</td>
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<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>
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<tr>
<td>§60.15</td>
<td>Reconstruction</td>
<td>Yes</td>
<td></td>
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<td>§60.16</td>
<td>Priority list</td>
<td>Yes</td>
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<td>§60.17</td>
<td>Incorporations by reference</td>
<td>Yes</td>
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<tr>
<td>§60.18</td>
<td>General control device requirements</td>
<td>No</td>
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</tr>
<tr>
<td>§60.19</td>
<td>General notification and reporting requirements</td>
<td>Yes</td>
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</table>
Introduction

§60.4760 What does this subpart do?

This subpart establishes new source performance standards for sewage sludge incineration (SSI) units. To the extent any requirement of this subpart is inconsistent with the requirements of subpart A of this part, the requirements of this subpart will apply.

§60.4765 When does this subpart become effective?

This subpart takes effect on September 21, 2011. Some of the requirements in this subpart apply to planning a SSI unit and must be completed even before construction is initiated on a SSI unit (i.e., the preconstruction requirements in §§60.4800 and 60.4805). Other requirements such as the emission limits, emission standards, and operating limits apply after the SSI unit begins operation.

Applicability and Delegation of Authority

§60.4770 Does this subpart apply to my sewage sludge incineration unit?

Yes, your SSI unit is an affected source if it meets all the criteria specified in paragraphs (a) through (c) of this section.

(a) Your SSI unit is a SSI unit for which construction commenced after October 14, 2010 or for which modification commenced after September 21, 2011.

(b) Your SSI unit is a SSI unit as defined in §60.4930.

(c) Your SSI unit is not exempt under §60.4780.

§60.4775 What is a new sewage sludge incineration unit?

(a) A new SSI unit is a SSI unit that meets either of the two criteria specified in paragraph (a)(1) or (a)(2) of this section.

(1) Commenced construction after October 14, 2010.

(2) Commenced modification after September 21, 2011.
(b) Physical or operational changes made to your SSI unit to comply with the emission guidelines in subpart MMMM of this part (Emission Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units) do not qualify as a modification under this subpart.

§60.4780 What sewage sludge incineration units are exempt from this subpart?

This subpart exempts combustion units that incinerate sewage sludge and are not located at a wastewater treatment facility designed to treat domestic sewage sludge. These units may be subject to another subpart of this part (e.g., subpart CCCC of this part). The owner or operator of such a combustion unit must notify the Administrator of an exemption claim under this section.

§60.4785 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the Administrator, as defined in §60.2, or a delegated authority such as your state, local, or tribal agency. If the Administrator has delegated authority to your state, local, or tribal agency, then that agency (as well as the Administrator) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if 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, the authorities contained in paragraph (c) of this section are retained by the Administrator 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 specified in paragraphs (c)(1) through (c)(8) of this section.

(1) Approval of alternatives to the emission limits and standards in Tables 1 and 2 to this subpart and operating limits established under §60.4850.

(2) Approval of major alternatives to test methods.

(3) Approval of major alternatives to monitoring.

(4) Approval of major alternatives to recordkeeping and reporting.

(5) The requirements in §60.4855.

(6) The requirements in §60.4835(b)(2).

(7) Performance test and data reduction waivers under §60.8(b).

(8) Preconstruction siting analysis in §§60.4800 and 60.4805.

§60.4790 How are these new source performance standards structured?

These new source performance standards contain the nine major components listed in paragraphs (a) through (i) of this section.

(a) Preconstruction siting analysis.

(b) Operator training and qualification.

(c) Emission limits, emission standards, and operating limits.

(d) Initial compliance requirements.
(e) Continuous compliance requirements.

(f) Performance testing, monitoring, and calibration requirements.

(g) Recordkeeping and reporting.

(h) Definitions.

(i) Tables.

§60.4795 Do all nine components of these new source performance standards apply at the same time?

No. You must meet the preconstruction siting analysis requirements before you commence construction of the SSI unit. The operator training and qualification, emission limits, emission standards, operating limits, performance testing, and compliance, monitoring, and most recordkeeping and reporting requirements are met after the SSI unit begins operation.

PRECONSTRUCTION SITING ANALYSIS

§60.4800 Who must prepare a siting analysis?

(a) You must prepare a siting analysis if you plan to commence construction of a SSI unit after October 14, 2010.

(b) You must prepare a siting analysis if you are required to submit an initial application for a construction permit under 40 CFR part 51, subpart I, or 40 CFR part 52, as applicable, for the modification of your SSI unit.

§60.4805 What is a siting analysis?

(a) The siting analysis must consider air pollution control alternatives that minimize, on a site-specific basis, to the maximum extent practicable, potential risks to public health or the environment, including impacts of the affected SSI unit on ambient air quality, visibility, soils, and vegetation. In considering such alternatives, the analysis may consider costs, energy impacts, nonair environmental impacts, or any other factors related to the practicability of the alternatives.

(b) Analyses of your SSI unit's impacts that are prepared to comply with state, local, or other Federal regulatory requirements may be used to satisfy the requirements of this section, provided they include the consideration of air pollution control alternatives specified in paragraph (a) of this section.

(c) You must complete and submit the siting requirements of this section as required under

OPERATOR TRAINING AND QUALIFICATION

§60.4810 What are the operator training and qualification requirements?

(a) A SSI unit cannot be operated unless a fully trained and qualified SSI unit operator is accessible, either at the facility or can be at the facility within 1 hour. The trained and qualified SSI unit operator may operate the SSI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified SSI unit operators are temporarily not accessible, you must follow the procedures in §60.4835.

(b) Operator training and qualification must be obtained through a state-approved program or by completing the requirements included in paragraph (c) of this section.

(c) Training must be obtained by completing an incinerator operator training course that includes, at a minimum, the three elements described in paragraphs (c)(1) through (c)(3) of this section.
(1) Training on the 10 subjects listed in paragraphs (c)(1)(i) through (c)(1)(x) of this section.

(i) Environmental concerns, including types of emissions.

(ii) Basic combustion principles, including products of combustion.

(iii) Operation of the specific type of incinerator to be used by the operator, including proper startup, sewage sludge feeding, and shutdown procedures.

(iv) Combustion controls and monitoring.

(v) Operation of air pollution control equipment and factors affecting performance (if applicable).

(vi) Inspection and maintenance of the incinerator and air pollution control devices.

(vii) Actions to prevent malfunctions or to prevent conditions that may lead to malfunctions.

(viii) Bottom and fly ash characteristics and handling procedures.

(ix) Applicable Federal, State, and local regulations, including Occupational Safety and Health Administration workplace standards.

(x) Pollution prevention.

(2) An examination designed and administered by the state-approved program.

(3) Written material covering the training course topics that may serve as reference material

§60.4815 When must the operator training course be completed?

The operator training course must be completed by the later of the two dates specified in paragraphs (a) and (b) of this section.

(a) Six months after your SSI unit startup.

(b) The date before an employee assumes responsibility for operating the SSI unit or assumes responsibility for supervising the operation of the SSI unit.

§60.4820 How do I obtain my operator qualification?

(a) You must obtain operator qualification by completing a training course that satisfies the criteria under §60.4810(b).

(b) Qualification is valid from the date on which the training course is completed and the operator successfully passes the examination required under §60.4810(c)(2).

§60.4825 How do I maintain my operator qualification?

To maintain qualification, you must complete an annual review or refresher course covering, at a minimum, the five topics described in paragraphs (a) through (e) of this section.

(a) Update of regulations.

(b) Incinerator operation, including startup and shutdown procedures, sewage sludge feeding, and ash handling.
(c) Inspection and maintenance.

(d) Prevention of malfunctions or conditions that may lead to malfunction.

(e) Discussion of operating problems encountered by attendees.

§60.4830  How do I renew my lapsed operator qualification?

You must renew a lapsed operator qualification before you begin operation of a SSI unit by one of the two methods specified in paragraphs (a) and (b) of this section.

(a) For a lapse of less than 3 years, you must complete a standard annual refresher course described in §60.4825.

(b) For a lapse of 3 years or more, you must repeat the initial qualification requirements in §60.4820(a).

§60.4835  What if all the qualified operators are temporarily not accessible?

If a qualified operator is not at the facility and cannot be at the facility within 1 hour, you must meet the criteria specified in either paragraph (a) or (b) of this section, depending on the length of time that a qualified operator is not accessible.

(a) When a qualified operator is not accessible for more than 8 hours, the SSI unit may be operated for less than 2 weeks by other plant personnel who are familiar with the operation of the SSI unit and who have completed a review of the information specified in §60.4840 within the past 12 months. However, you must record the period when a qualified operator was not accessible and include this deviation in the annual report as specified under §60.4915(d).

(b) When a qualified operator is not accessible for 2 weeks or more, you must take the two actions that are described in paragraphs (b)(1) and (b)(2) of this section.

(1) Notify the Administrator of this deviation in writing within 10 days. In the notice, state what caused this deviation, what you are doing to ensure that a qualified operator is accessible, and when you anticipate that a qualified operator will be accessible.

(2) Submit a status report to the Administrator every 4 weeks outlining what you are doing to ensure that a qualified operator is accessible, stating when you anticipate that a qualified operator will be accessible, and requesting approval from the Administrator to continue operation of the SSI unit. You must submit the first status report 4 weeks after you notify the Administrator of the deviation under paragraph (b)(1) of this section.

(i) If the Administrator notifies you that your request to continue operation of the SSI unit is disapproved, the SSI unit may continue operation for 30 days, and then must cease operation.

(ii) Operation of the unit may resume if a qualified operator is accessible as required under §60.4810(a). You must notify the Administrator within 5 days of having resumed operations and of having a qualified operator accessible.

§60.4840  What site-specific documentation is required and how often must it be reviewed by qualified operators and plant personnel?

(a) You must maintain at the facility the documentation of the operator training procedures specified under §60.4910(c)(1) and make the documentation readily accessible to all SSI unit operators.

(b) You must establish a program for reviewing the information listed in §60.4910(c)(1) with each qualified incinerator operator and other plant personnel who may operate the unit according to the provisions of §60.4835(a), according to the following schedule:
(1) The initial review of the information listed in §60.4910(c)(1) must be conducted within 6 months after the effective date of this subpart or prior to an employee's assumption of responsibilities for operation of the SSI unit, whichever date is later.

(2) Subsequent annual reviews of the information listed in §60.4910(c)(1) must be conducted no later than 12 months following the previous review.

**EMISSION LIMITS, EMISSION STANDARDS, AND OPERATING LIMITS AND REQUIREMENTS**

**§60.4845 What emission limits and standards must I meet and by when?**

You must meet the emission limits and standards specified in Table 1 or 2 to this subpart within 60 days after your SSI unit reaches the feed rate at which it will operate or within 180 days after its initial startup, whichever comes first. The emission limits and standards apply at all times the unit is operating, and during periods of malfunction. The emission limits and standards apply to emissions from a bypass stack or vent while sewage sludge is in the combustion chamber (i.e., until the sewage sludge feed to the combustor has been cut off for a period of time not less than the sewage sludge incineration residence time).

**§60.4850 What operating limits and requirements must I meet and by when?**

You must meet, as applicable, the operating limits and requirements specified in paragraphs (a) through (d) and (h) of this section, according to the schedule specified in paragraph (e) of this section. The operating parameters for which you will establish operating limits for a wet scrubber, fabric filter, electrostatic precipitator, or activated carbon injection are listed in Table 3 to this subpart. You must comply with the operating requirements in paragraph (f) of this section and the requirements in paragraph (g) of this section for meeting any new operating limits, re-established in §60.4890. The operating limits apply at all times that sewage sludge is in the combustion chamber (i.e., until the sewage sludge feed to the combustor has been cut off for a period of time not less than the sewage sludge incineration residence time).

(a) You must meet a site-specific operating limit for minimum operating temperature of the combustion chamber (or afterburner combustion chamber) that you establish in §60.4890(a)(2)(i).

(b) If you use a wet scrubber, electrostatic precipitator, or activated carbon injection to comply with an emission limit, you must meet the site-specific operating limits that you establish in §60.4870 for each operating parameter associated with each air pollution control device.

(c) If you use a fabric filter to comply with the emission limits, you must install the bag leak detection system specified in §§60.4880(b) and 60.4905(b)(3)(i) and operate the bag leak detection system such that the alarm does not sound more than 5 percent of the operating time during a 6-month period. You must calculate the alarm time as specified in §60.4870.

(d) You must meet the operating requirements in your site-specific fugitive emission monitoring plan, submitted as specified in §60.4880(d) to ensure that your ash handling system will meet the emission standard for fugitive emissions from ash handling.

(e) You must meet the operating limits and requirements specified in paragraphs (a) through (d) of this section 60 days after your SSI unit reaches the feed rate at which it will operate, or within 180 days after its initial startup, whichever comes first.

(f) You must monitor the feed rate and moisture content of the sewage sludge fed to the sewage sludge incinerator, as specified in paragraphs (f)(1) and (f)(2) of this section.

(1) Continuously monitor the sewage sludge feed rate and calculate a daily average for all hours of operation during each 24-hour period. Keep a record of the daily average feed rate, as specified in §60.4910(f)(3)(ii).
(2) Take at least one grab sample per day of the sewage sludge fed to the sewage sludge incinerator. If you take more than one grab sample in a day, calculate the daily average for the grab samples. Keep a record of the daily average moisture content, as specified in §60.4910(f)(3)(ii).

(g) For the operating limits and requirements specified in paragraphs (a) through (d) and (h) of this section, you must meet any new operating limits and requirements, re-established according to §60.4890(d).

(h) If you use an air pollution control device other than a wet scrubber, fabric filter, electrostatic precipitator, or activated carbon injection to comply with the emission limits in Table 1 or 2 to this subpart, you must meet any site-specific operating limits or requirements that you establish as required in §60.4855.

§60.4855 How do I establish operating limits if I do not use a wet scrubber, fabric filter, electrostatic precipitator, or activated carbon injection, or if I limit emissions in some other manner, to comply with the emission limits?

If you use an air pollution control device other than a wet scrubber, fabric filter, electrostatic precipitator, or activated carbon injection, or limit emissions in some other manner (e.g., materials balance) to comply with the emission limits in §60.4845, you must meet the requirements in paragraphs (a) and (b) of this section.

(a) Meet the applicable operating limits and requirements in §60.4850, and establish applicable operating limits according to §60.4870.

(b) Petition the Administrator for specific operating parameters, operating limits, and averaging periods to be established during the initial performance test and to be monitored continuously thereafter.

(1) You are responsible for submitting any supporting information in a timely manner to enable the Administrator to consider the application prior to the performance test. You must not conduct the initial performance test until after the petition has been approved by the Administrator, and you must comply with the operating limits as written, pending approval by the Administrator. Neither submittal of an application, nor the Administrator's failure to approve or disapprove the application relieves you of the responsibility to comply with any provision of this subpart.

(2) Your petition must include the five items listed in paragraphs (b)(2)(i) through (b)(2)(v) of this section.

(i) Identification of the specific parameters you propose to monitor.

(ii) A discussion of the relationship between these parameters and emissions of regulated pollutants, identifying how emissions of regulated pollutants change with changes in these parameters, and how limits on these parameters will serve to limit emissions of regulated pollutants.

(iii) A discussion of how you will establish the upper and/or lower values for these parameters that will establish the operating limits on these parameters, including a discussion of the averaging periods associated with those parameters for determining compliance.

(iv) 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.

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

§60.4860 Do the emission limits, emission standards, and operating limits apply during periods of startup, shutdown, and malfunction?

The emission limits and standards apply at all times and during periods of malfunction. The operating limits apply at all times that sewage sludge is in the combustion chamber (i.e., until the sewage sludge feed to the combustor has been cut off for a period of time not less than the sewage sludge incineration residence time).
§60.4861 How do I establish an affirmative defense for exceedance of an emission limit or standard during malfunction?

In response to an action to enforce the numerical emission standards set forth in paragraph §60.4845, you may assert an affirmative defense to a claim for civil penalties for exceedances of emission limits that are caused by malfunction, as defined in §60.2. Appropriate penalties may be assessed, however, if you fail to meet your burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(a) To establish the affirmative defense in any action to enforce such a limit, you must timely meet the notification requirements in paragraph (b) of this section, and must prove by a preponderance of evidence that the conditions in paragraphs (a)(1) through (a)(9) of this section are met.

(1) The excess emissions meet:

(i) Were caused by a sudden, infrequent, and unavoidable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner, and

(ii) Could not have been prevented through careful planning, proper design or better operation and maintenance practices, and

(iii) Did not stem from any activity or event that could have been foreseen and avoided, or planned for, and

(iv) Were not part of a recurring pattern indicative of inadequate design, operation, or maintenance, and

(2) Repairs were made as expeditiously as possible when the applicable emission limits were being exceeded. Off-shift and overtime labor were used, to the extent practicable to make these repairs, and

(3) The frequency, amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions, and

(4) If the excess emissions resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage, and

(5) All possible steps were taken to minimize the impact of the excess emissions on ambient air quality, the environment and human health, and

(6) All emissions monitoring and control systems were kept in operation if at all possible consistent with safety and good air pollution control practices, and

(7) All of the actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs, and

(8) At all times, the affected facility was operated in a manner consistent with good practices for minimizing emissions, and

(9) A written root cause analysis has been prepared the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the excess emissions resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of excess emissions that were the result of the malfunction.

(b) The owner or operator of the SSI unit experiencing an exceedance of its emission limit(s) during a malfunction, shall notify the Administrator by telephone or facsimile (fax) transmission as soon as possible, but no later than 2 business days after the initial occurrence of the malfunction, if it wishes to avail itself of an affirmative defense to civil penalties for that malfunction. The owner or operator seeking to assert an affirmative defense shall also submit a written report to the Administrator within 45 days of the initial occurrence of the exceedance of the standard in §60.4845 to demonstrate, with all necessary supporting documentation, that it has met the requirements set forth in paragraph (a) of this section. The owner or operator may seek an extension of this deadline for up to 30 additional
days by submitting a written request to the Administrator before the expiration of the 45 day period. Until a request for an extension has been approved by the Administrator, the owner or operator is subject to the requirement to submit such report within 45 days of the initial occurrence of the exceedance.

**INITIAL COMPLIANCE REQUIREMENTS**

§60.4865 How and when do I demonstrate initial compliance with the emission limits and standards?

To demonstrate initial compliance with the emission limits and standards in Table 1 or 2 to this subpart, use the procedures specified in paragraph (a) of this section for particulate matter, hydrogen chloride, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, lead, and fugitive emissions from ash handling, and follow the procedures specified in paragraph (b) of this section for carbon monoxide. In lieu of using the procedures specified in paragraph (a) of this section, you also have the option to demonstrate initial compliance using the procedures specified in paragraph (b) of this section for particulate matter, hydrogen chloride, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, and lead. You must meet the requirements of paragraphs (a) or (b) of this section, as applicable, and paragraphs (c) and (d) of this section, according to the performance testing, monitoring, and calibration requirements in §60.4900(a) and (b). Except as provided in paragraph (e) of this section, within 60 days after your SSI unit reaches the feed rate at which it will operate, or within 180 days after its initial startup, whichever comes first, you must demonstrate that your SSI unit meets the emission limits and standards specified in Table 1 or 2 to this subpart.

(a) Demonstrate initial compliance using the performance test required in §60.8. You must demonstrate that your SSI unit meets the emission limits and standards specified in Table 1 or 2 to this subpart for particulate matter, hydrogen chloride, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, and lead, and fugitive emissions from ash handling using the performance test. The initial performance test must be conducted using the test methods, averaging methods, and minimum sampling volumes or durations specified in Table 1 or 2 to this subpart and according to the testing, monitoring, and calibration requirements specified in §60.4900(a).

(b) Demonstrate initial compliance using a continuous emissions monitoring system or continuous automated sampling system. The option to use a continuous emissions monitoring system for hydrogen chloride, dioxins/furans, cadmium, or lead takes effect on the date a final performance specification applicable to hydrogen chloride, dioxins/furans, cadmium, or lead is published in the FEDERAL REGISTER. The option to use a continuous automated sampling system for dioxins/furans takes effect on the date a final performance specification for such a continuous automated sampling system is published in the FEDERAL REGISTER. Collect data as specified in §60.4900(b)(6) and use the following procedures:

1. To demonstrate initial compliance with the carbon monoxide emission limit specified in Table 1 or 2 to this subpart, you must use the carbon monoxide continuous emissions monitoring system specified in §60.4900(b). For determining compliance with the carbon monoxide concentration limit using carbon monoxide CEMS, the correction to 7 percent oxygen does not apply during periods of startup or shutdown. Use the measured carbon monoxide concentration without correcting for oxygen concentration in averaging with other carbon monoxide concentrations (corrected to 7 percent oxygen) to determine the 24-hour average value.

2. To demonstrate initial compliance with the emission limits specified in Table 1 or 2 to this subpart for particulate matter, hydrogen chloride, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, and lead, you may substitute the use of a continuous monitoring system in lieu of conducting the initial performance test required in paragraph (a) of this section, as follows:

   (i) You may substitute the use of a continuous emissions monitoring system for any pollutant specified in paragraph (b)(2) of this section in lieu of conducting the initial performance test for that pollutant in paragraph (a) of this section.

   (ii) You may substitute the use of a continuous automated sampling system for mercury or dioxins/furans in lieu of conducting the initial mercury or dioxin/furan performance test in paragraph (a) of this section.

3. If you use a continuous emissions monitoring system to demonstrate compliance with an applicable emission limit in Table 1 or 2 to this subpart, as described in paragraph (b)(1) or (b)(2) of this section, you must use the continuous emissions monitoring system and follow the requirements specified in §60.4900(b). You must measure emissions
according to §60.13 to calculate 1-hour arithmetic averages, corrected to 7 percent oxygen (or carbon dioxide). You must demonstrate initial compliance using a 24-hour block average of these 1-hour arithmetic average emission concentrations, calculated using Equation 19-19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A-7.

(4) If you use a continuous automated sampling system to demonstrate compliance with an applicable emission limit in Table 1 or 2 to this subpart, as described in paragraph (b)(2) of this section, you must:

(i) Use the continuous automated sampling system specified in §60.58b(p) and (q), and measure and calculate average emissions corrected to 7 percent oxygen (or carbon dioxide) according to §60.58b(p) and your monitoring plan.

(A) Use the procedures specified in §60.58b(p) to calculate 24-hour block averages to determine compliance with the mercury emission limit in Table 1 or 2 to this subpart.

(B) Use the procedures specified in §60.58b(p) to calculate 2-week block averages to determine compliance with the dioxin/furan (total mass basis or toxic equivalency basis) emission limits in Table 1 or 2 to this subpart.

(ii) Comply with the provisions in §60.58b(q) to develop a monitoring plan. For mercury continuous automated sampling systems, you must use Performance Specification 12B of appendix B of part 75 and Procedure 5 of appendix F of this part.

(5) Except as provided in paragraph (e) of this section, you must complete your initial performance evaluations required under your monitoring plan for any continuous emissions monitoring system and continuous automated sampling systems according to the provisions of §60.4880. Your performance evaluation must be conducted using the procedures and acceptance criteria specified in §60.4880(a)(3).

c) To demonstrate initial compliance with the dioxins/furans toxic equivalency emission limit in Table 1 or 2 to this subpart, determine dioxins/furans toxic equivalency as follows:

(1) Measure the concentration of each dioxin/furan tetra- through octachlorinated-isomer emitted using Method 23 at 40 CFR part 60, appendix A-7.

(2) Multiply the concentration of each dioxin/furan (tetra- through octa-chlorinated) isomer by its corresponding toxic equivalency factor specified in Table 4 to this subpart.

(3) Sum the products calculated in accordance with paragraph (c)(2) of this section to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

d) Submit an initial compliance report, as specified in §60.4915(c).

(e) If you demonstrate initial compliance using the performance test specified in paragraph (a) of this section, then the provisions of this paragraph (e) apply. If a force majeure is about to occur, occurs, or has occurred for which you intend to assert a claim of force majeure, you must notify the Administrator in writing as specified in §60.4915(g). You must conduct the initial performance test as soon as practicable after the force majeure occurs. The Administrator will determine whether or not to grant the extension to the initial performance test deadline, and will notify you in writing of approval or disapproval of the request for an extension as soon as practicable. Until an extension of the performance test deadline has been approved by the Administrator, you remain strictly subject to the requirements of this subpart.

§60.4870 How do I establish my operating limits?

(a) You must establish the site-specific operating limits specified in paragraphs (b) through (h) of this section or established in §60.4855, as applicable, during your initial performance tests required in §60.4865. You must meet the requirements in §60.4890(d) to confirm these operating limits or re-establish new operating limits using operating data recorded during any performance tests or performance evaluations required in §60.4885. You must follow the data measurement and recording frequencies and data averaging times specified in Table 3 to this subpart or as established in §60.4855, and you must follow the testing, monitoring, and calibration requirements specified in §§60.4900 and 60.4905 or established in §60.4855. You are not required to establish operating limits for the
operating parameters listed in Table 3 to this subpart for a control device if you use a continuous monitoring system to demonstrate compliance with the emission limits in Table 1 or 2 to this subpart for the applicable pollutants, as follows:

(1) For a scrubber designed to control emissions of hydrogen chloride or sulfur dioxide, you are not required to establish an operating limit and monitor, scrubber liquid flow rate or scrubber liquid pH if you use the continuous monitoring system specified in §§60.4865(b) and 60.4885(b) to demonstrate compliance with the emission limit for hydrogen chloride or sulfur dioxide.

(2) For a scrubber designed to control emissions of particulate matter, cadmium, and lead, you are not required to establish an operating limit and monitor pressure drop across the scrubber or scrubber liquid flow rate if you use the continuous monitoring system specified in §§60.4865(b) and 60.4885(b) to demonstrate compliance with the emission limit for particulate matter, cadmium, and lead.

(3) For an electrostatic precipitator designed to control emissions of particulate matter, cadmium, and lead, you are not required to establish an operating limit and monitor secondary voltage of the collection plates, secondary amperage of the collection plates, or effluent water flow rate at the outlet of the electrostatic precipitator if you use the continuous monitoring system specified in §§60.4865(b) and 60.4885(b) to demonstrate compliance with the emission limit for particulate matter, cadmium, and lead.

(4) For an activated carbon injection system designed to control emissions of mercury, you are not required to establish an operating limit and monitor sorbent injection rate and carrier gas flow rate (or carrier gas pressure drop) if you use the continuous monitoring system specified in §§60.4865(b) and 60.4885(b) to demonstrate compliance with the emission limit for mercury.

(5) For an activated carbon injection system designed to control emissions of dioxins/furans, you are not required to establish an operating limit and monitor sorbent injection rate and carrier gas flow rate (or carrier gas pressure drop) if you use the continuous monitoring system specified in §§60.4865(b) and 60.4885(b) to demonstrate compliance with the emission limit for dioxins/furans (total mass basis or toxic equivalency basis).

(b) Minimum pressure drop across each wet scrubber used to meet the particulate matter, lead, and cadmium emission limits in Table 1 or 2 to this subpart, equal to the lowest 4-hour average pressure drop across each such wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter, lead, and cadmium emission limits.

(c) Minimum scrubber liquid flow rate (measured at the inlet to each wet scrubber), equal to the lowest 4-hour average liquid flow rate measured during the most recent performance test demonstrating compliance with all applicable emission limits.

(d) Minimum scrubber liquid pH for each wet scrubber used to meet the sulfur dioxide or hydrogen chloride emission limits in Table 1 or 2 to this subpart, equal to the lowest 1-hour average scrubber liquid pH measured during the most recent performance test demonstrating compliance with the sulfur dioxide and hydrogen chloride emission limits.

(e) Minimum combustion chamber operating temperature (or minimum afterburner temperature), equal to the lowest 4-hour average combustion chamber operating temperature (or afterburner temperature) measured during the most recent performance test demonstrating compliance with all applicable emission limits.

(f) Minimum power input to the electrostatic precipitator collection plates, equal to the lowest 4-hour average power measured during the most recent performance test demonstrating compliance with the particulate matter, lead, and cadmium emission limits. Power input must be calculated as the product of the secondary voltage and secondary amperage to the electrostatic precipitator collection plates. Both the secondary voltage and secondary amperage must be recorded during the performance test.

(g) Minimum effluent water flow rate at the outlet of the electrostatic precipitator, equal to the lowest 4-hour average effluent water flow rate at the outlet of the electrostatic precipitator measured during the most recent performance test demonstrating compliance with the particulate matter, lead, and cadmium emission limits.
(h) For activated carbon injection, establish the site-specific operating limits specified in paragraphs (h)(1) through (h)(3) of this section.

(1) Minimum mercury sorbent injection rate, equal to the lowest 4-hour average mercury sorbent injection rate measured during the most recent performance test demonstrating compliance with the mercury emission limit.

(2) Minimum dioxin/furan sorbent injection rate, equal to the lowest 4-hour average dioxin/furan sorbent injection rate measured during the most recent performance test demonstrating compliance with the dioxin/furan (total mass basis or toxic equivalency basis) emission limit.

(3) Minimum carrier gas flow rate or minimum carrier gas pressure drop, as follows:

(i) Minimum carrier gas flow rate, equal to the lowest 4-hour average carrier gas flow rate measured during the most recent performance test demonstrating compliance with the applicable emission limit.

(ii) Minimum carrier gas pressure drop, equal to the lowest 4-hour average carrier gas flow rate measured during the most recent performance test demonstrating compliance with the applicable emission limit.

§60.4875 By what date must I conduct the initial air pollution control device inspection and make any necessary repairs?

(a) You must conduct an air pollution control device inspection according to §60.4900(c) within 60 days of installing an air pollution control device or within 180 days of startup of the SSI unit using the air pollution control device, whichever comes first.

(b) Within 10 operating days following the air pollution control device inspection under paragraph (a) of this section, all necessary repairs must be completed unless you obtain written approval from the Administrator establishing a date whereby all necessary repairs of the SSI unit must be completed.

§60.4880 How do I develop a site-specific monitoring plan for my continuous monitoring, bag leak detection, and ash handling systems, and by what date must I conduct an initial performance evaluation?

You must develop and submit to the Administrator for approval a site-specific monitoring plan for each continuous monitoring system required under this subpart, according to the requirements in paragraphs (a) through (d) of this section. This requirement also applies to you if you petition the Administrator for alternative monitoring parameters under §60.13(i) and paragraph (e) of this section. If you use a continuous automated sampling system to comply with the mercury or dioxin/furan (total mass basis or toxic equivalency basis) emission limit, you must develop your monitoring plan as specified in §60.58b(q), and you are not required to meet the requirements in paragraphs (a) and (b) of this section. You must also submit a site-specific monitoring plan for your ash handling system, as specified in paragraph (d) of this section. You must submit and update your monitoring plans as specified in paragraphs (f) through (h) of this section.

(a) For each continuous monitoring system, your monitoring plan must address the elements and requirements specified in paragraphs (a)(1) through (a)(8) of this section. You must operate and maintain the continuous monitoring system in continuous operation according to the site-specific monitoring plan.

(1) Installation of the continuous monitoring system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device).

(2) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer and the data collection and reduction systems.

(3) Performance evaluation procedures and acceptance criteria (e.g., calibrations).

(i) For continuous emissions monitoring systems, your performance evaluation and acceptance criteria must include, but is not limited to, the following:
(A) The applicable requirements for continuous emissions monitoring systems specified in §60.13.

(B) The applicable performance specifications (e.g., relative accuracy tests) in appendix B of this part.

(C) The applicable procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) in appendix F of this part.

(D) A discussion of how the occurrence and duration of out-of-control periods will affect the suitability of CEMS data, where out-of-control has the meaning given in section (a)(7)(i) of this section.

(ii) For continuous parameter monitoring systems, your performance evaluation and acceptance criteria must include, but is not limited to the following:

(A) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (a)(3)(ii)(A)(1) through (4) of this section.

(1) Install the flow sensor and other necessary equipment in a position that provides a representative flow.

(2) Use a flow sensor with a measurement sensitivity of no greater than 2 percent of the expected process flow rate.

(3) Minimize the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(4) Conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(B) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (a)(3)(ii)(B)(1) through (6) of this section.

(1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (e.g., particulate matter scrubber pressure drop).

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.

(3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.

(4) Perform checks at least once each process operating day to ensure pressure measurements are not obstructed (e.g., check for pressure tap pluggage daily).

(5) Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in your monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(C) If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (a)(3)(ii)(C)(1) through (4) of this section.

(1) Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH.

(2) Ensure the sample is properly mixed and representative of the fluid to be measured.
(3) Conduct a performance evaluation of the pH monitoring system in accordance with your monitoring plan at least once each process operating day.

(4) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than quarterly.

(D) If you have an operating limit that requires the use of a temperature measurement device, you must meet the requirements in paragraphs (a)(3)(ii)(D)(1) through (4) of this section.

(1) Install the temperature sensor and other necessary equipment in a position that provides a representative temperature.

(2) Use a temperature sensor with a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit), or 1.0 percent of the temperature value, whichever is larger, for a noncryogenic temperature range.

(3) Use a temperature sensor with a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit), or 2.5 percent of the temperature value, whichever is larger, for a cryogenic temperature range.

(4) Conduct a temperature measurement device performance evaluation at the time of each performance test but no less frequently than annually.

(E) If you have an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator, you must meet the requirements in paragraphs (a)(3)(ii)(E)(1) and (2) of this section.

(1) Install sensors to measure (secondary) voltage and current to the electrostatic precipitator collection plates.

(2) Conduct a performance evaluation of the electric power monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(F) If you have an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (a)(3)(ii)(F)(1) and (2) of this section.

(1) Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate.

(2) Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(4) Ongoing operation and maintenance procedures in accordance with the general requirements of §60.11(d).

(5) Ongoing data quality assurance procedures in accordance with the general requirements of §60.13.

(6) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of §60.7(b), (c), (c)(1), (c)(4), (d), (e), (f) and (g).

(7) Provisions for periods when the continuous monitoring system is out of control, as follows:

(i) A continuous monitoring system is out of control if the conditions of paragraph (a)(7)(i)(A) or (a)(7)(i)(B) of this section are met.

(A) The zero (low-level), mid-level (if applicable), or high-level calibration drift exceeds two times the applicable calibration drift specification in the applicable performance specification or in the relevant standard.
(B) The continuous monitoring system fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit.

(ii) When the continuous monitoring system is out of control as specified in paragraph (a)(7)(i) of this section, you must take the necessary corrective action and must repeat all necessary tests that indicate that the system is out of control. You must take corrective action and conduct retesting until the performance requirements are below the applicable limits. The beginning of the out-of-control period is the hour you conduct a performance check (e.g., calibration drift) that indicates an exceedance of the performance requirements established under this part. The end of the out-of-control period is the hour following the completion of corrective action and successful demonstration that the system is within the allowable limits.

(8) Schedule for conducting initial and periodic performance evaluations.

(b) If a bag leak detection system is used, your monitoring plan must include a description of the following items:

(1) Installation of the bag leak detection system in accordance with paragraphs (b)(1)(i) and (ii) of this section.

(i) Install the bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute particulate matter loadings for each exhaust stack, roof vent, or compartment (e.g., for a positive pressure fabric filter) of the fabric filter.

(ii) Use a bag leak detection system certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less.

(2) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established. Use a bag leak detection system equipped with a system that will sound an alarm when the system detects an increase in relative particulate matter emissions over a preset level. The alarm must be located where it is observed readily and any alert is detected and recognized easily by plant operating personnel.

(3) Evaluations of the performance of the bag leak detection system, performed in accordance with your monitoring plan and consistent with the guidance provided in Fabric Filter Bag Leak Detection Guidance, EPA-454/R-98-015, September 1997 (incorporated by reference, see §60.17).

(4) Operation of the bag leak detection system, including quality assurance procedures.

(5) Maintenance of the bag leak detection system, including a routine maintenance schedule and spare parts inventory list.

(6) Recordkeeping (including record retention) of the bag leak detection system data. Use a bag leak detection system equipped with a device to continuously record the output signal from the sensor.

(c) You must conduct an initial performance evaluation of each continuous monitoring system and bag leak detection system, as applicable, in accordance with your monitoring plan and §60.13(c). For the purposes of this subpart, the provisions of §60.13(c) also apply to the bag leak detection system. You must conduct the initial performance evaluation of each continuous monitoring system within 60 days of installation of the monitoring system.

(d) You must submit a monitoring plan specifying the ash handling system operating procedures that you will follow to ensure that you meet the fugitive emissions limit specified in Table 1 or 2 to this subpart.

(e) You may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the standards of this subpart, subject to the provisions of paragraphs (e)(1) through (e)(6) of this section.

(1) The Administrator will not approve averaging periods other than those specified in this section, unless you document, using data or information, that the longer averaging period will ensure that emissions do not exceed levels achieved over the duration of three performance test runs.
(2) If the application to use an alternate monitoring requirement is approved, you must continue to use the original monitoring requirement until approval is received to use another monitoring requirement.

(3) You must submit the application for approval of alternate monitoring requirements no later than the notification of performance test. The application must contain the information specified in paragraphs (e)(3)(i) through (e)(3)(iii) of this section:

(i) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach.

(ii) A description of the proposed alternative monitoring requirement, including the operating parameter to be monitored, the monitoring approach and technique, the averaging period for the limit, and how the limit is to be calculated.

(iii) Data or information documenting that the alternative monitoring requirement would provide equivalent or better assurance of compliance with the relevant emission standard.

(4) The Administrator will notify you of the approval or denial of the application within 90 calendar days after receipt of the original request, or within 60 calendar days of the receipt of any supplementary information, whichever is later. The Administrator will not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard. Before disapproving any alternate monitoring application, the Administrator will provide the following:

(i) Notice of the information and findings upon which the intended disapproval is based.

(ii) Notice of opportunity for you to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for you to provide additional supporting information.

(5) You are responsible for submitting any supporting information in a timely manner to enable the Administrator to consider the application prior to the performance test. Neither submittal of an application, nor the Administrator’s failure to approve or disapprove the application relieves you of the responsibility to comply with any provision of this subpart.

(6) The Administrator may decide at any time, on a case-by-case basis, that additional or alternative operating limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of this subpart.

(f) You must submit your monitoring plans required in paragraphs (a) and (b) of this section at least 60 days before your initial performance evaluation of your continuous monitoring system(s).

(g) You must submit your monitoring plan for your ash handling system, as required in paragraph (d) of this section, at least 60 days before your initial compliance test date.

(h) You must update and resubmit your monitoring plan if there are any changes or potential changes in your monitoring procedures or if there is a process change, as defined in §60.4930.

CONTINUOUS COMPLIANCE REQUIREMENTS

§60.4885 How and when do I demonstrate continuous compliance with the emission limits and standards?

To demonstrate continuous compliance with the emission limits and standards specified in Table 1 or 2 to this subpart, use the procedures specified in paragraph (a) of this section for particulate matter, hydrogen chloride, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, lead, and fugitive emissions from ash handling, and follow the procedures specified in paragraph (b) of this section for carbon monoxide. In lieu of using the procedures specified in paragraph (a) of this section, you also have the option to demonstrate continuous compliance using the procedures specified in paragraph (b) of this section for particulate...
matter, hydrogen chloride, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, and lead. You must meet the requirements of paragraphs (a) and (b) of this section, as applicable, and paragraphs (c) through (e) of this section, according to the performance testing, monitoring, and calibration requirements in §60.4900(a) and (b). You may also petition the Administrator for alternative monitoring parameters as specified in paragraph (f) of this section.

(a) Demonstrate continuous compliance using a performance test. Except as provided in paragraphs (a)(3) and (e) of this section, following the date that the initial performance test for each pollutant in Table 1 or 2 to this subpart except carbon monoxide is completed, you must conduct a performance test for each such pollutant on an annual basis (between 11 and 13 calendar months following the previous performance test). The performance test must be conducted using the test methods, averaging methods, and minimum sampling volumes or durations specified in Table 1 or 2 to this subpart and according to the testing, monitoring, and calibration requirements specified in §60.4900(a).

(1) You may conduct a repeat performance test at any time to establish new values for the operating limits to apply from that point forward. The Administrator may request a repeat performance test at any time.

(2) You must repeat the performance test within 60 days of a process change, as defined in §60.4930.

(3) Except as specified in paragraphs (a)(1) and (2) of this section, you can conduct performance tests less often for a given pollutant, as specified in paragraphs (a)(3)(i) through (iii) of this section.

(i) You can conduct performance tests less often if your performance tests for the pollutant for at least 2 consecutive years show that your emissions are at or below 75 percent of the emission limit specified in Table 2 or 3 to this subpart, and there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. In this case, you do not have to conduct a performance test for that pollutant for the next 2 years. You must conduct a performance test during the third year and no more than 37 months after the previous performance test.

(ii) If your SSI unit continues to meet the emission limit for the pollutant, you may choose to conduct performance tests for the pollutant every third year if your emissions are at or below 75 percent of the emission limit, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions, but each such performance test must be conducted no more than 37 months after the previous performance test.

(iii) If a performance test shows emissions exceeded 75 percent of the emission limit for a pollutant, you must conduct annual performance tests for that pollutant until all performance tests over 2 consecutive years show compliance.

(b) Demonstrate continuous compliance using a continuous emissions monitoring system or continuous automated sampling system. The option to use a continuous emissions monitoring system for hydrogen chloride, dioxins/furans, cadmium, or lead takes effect on the date a final performance specification applicable to hydrogen chloride, dioxins/furans, cadmium, or lead is published in the FEDERAL REGISTER. The option to use a continuous automated sampling system for dioxins/furans takes effect on the date a final performance specification for such a continuous automated sampling system is published in the FEDERAL REGISTER. Collect data as specified in §60.4900(b)(6) and use the following procedures:

(1) To demonstrate continuous compliance with the carbon monoxide emission limit, you must use the carbon monoxide continuous emissions monitoring system specified in §60.4900(b). For determining compliance with the carbon monoxide concentration limit using carbon monoxide CEMS, the correction to 7 percent oxygen does not apply during periods of startup or shutdown. Use the measured carbon monoxide concentration without correcting for oxygen concentration in averaging with other carbon monoxide concentrations (corrected to 7 percent oxygen) to determine the 24-hour average value.

(2) To demonstrate continuous compliance with the emission limits for particulate matter, hydrogen chloride, dioxins/furans (total mass basis or toxic equivalency basis), mercury, nitrogen oxides, sulfur dioxide, cadmium, and lead, you may substitute the use of a continuous monitoring system in lieu of conducting the annual performance test required in paragraph (a) of this section, as follows:
(i) You may substitute the use of a continuous emissions monitoring system for any pollutant specified in paragraph (b)(2) of this section in lieu of conducting the annual performance test for that pollutant in paragraph (a) of this section.

(ii) You may substitute the use of a continuous automated sampling system for mercury or dioxins/furans in lieu of conducting the annual mercury or dioxin/furan performance test in paragraph (a) of this section.

(3) If you use a continuous emissions monitoring system to demonstrate compliance with an applicable emission limit in either paragraph (b)(1) or (b)(2) of this section, you must use the continuous emissions monitoring system and follow the requirements specified in §60.4900(b). You must measure emissions according to §60.13 to calculate 1-hour arithmetic averages, corrected to 7 percent oxygen (or carbon dioxide). You must demonstrate initial compliance using a 24-hour block average of these 1-hour arithmetic average emission concentrations, calculated using Equation 19-19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A-7.

(4) If you use a continuous automated sampling system to demonstrate compliance with an applicable emission limit in paragraph (b)(2) of this section, you must:

(i) Use the continuous automated sampling system specified in §60.58b(p) and (q), and measure and calculate average emissions corrected to 7 percent oxygen (or carbon dioxide) according to §60.58b(p) and your monitoring plan.

(A) Use the procedures specified in §60.58b(p) to calculate 24-hour averages to determine compliance with the mercury emission limit in Table 1 or 2 to this subpart.

(B) Use the procedures specified in §60.58b(p) to calculate 2-week averages to determine compliance with the dioxin/furan emission limit (total mass basis or toxic equivalency basis) in Table 1 or 2 to this subpart.

(ii) Update your monitoring plan as specified in §60.4880(e). For mercury continuous automated sampling systems, you must use Performance Specification 12B of appendix B of part 75 and Procedure 5 of appendix F of this part.

(5) Except as provided in paragraph (e) of this section, you must complete your periodic performance evaluations required under your monitoring plan for any continuous emissions monitoring system and continuous automated sampling systems, according to the schedule specified in your monitoring plan. If you were previously determining compliance by conducting an annual performance test (or according to the less frequent testing for a pollutant as provided in paragraph (a)(3) of this section), you must complete the initial performance evaluation required in your monitoring plan in §60.4880 for the continuous monitoring system prior to using the continuous emissions monitoring system to demonstrate compliance or continuous automated sampling system. Your performance evaluation must be conducted using the procedures and acceptance criteria specified in §60.4880(a)(3).

(c) To demonstrate compliance with the dioxins/furans toxic equivalency emission limit in paragraph (a) or (b) of this section, you must determine dioxins/furans toxic equivalency as follows:

(1) Measure the concentration of each dioxin/furan tetra- through octa-chlorinated isomer emitted using EPA Method 23.

(2) For each dioxin/furan (tetra- through octa-chlorinated) isomer measured in accordance with paragraph (c)(1) of this section, multiply the isomer concentration by its corresponding toxic equivalency factor specified in Table 4 to this subpart.

(3) Sum the products calculated in accordance with paragraph (c)(2) of this section to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

(d) You must submit the annual compliance report specified in §60.4915(d). You must submit the deviation report specified in §60.4915(e) for each instance that you did not meet each emission limit in Table 1 or 2 to this subpart.

(e) If you demonstrate continuous compliance using a performance test, as specified in paragraph (a) of this section, then the provisions of this paragraph (e) apply. If a force majeure is about to occur, occurs, or has occurred for which
you intend to assert a claim of force majeure, you must notify the Administrator in writing as specified in §60.4915(g). You must conduct the performance test as soon as practicable after the force majeure occurs. The Administrator will determine whether or not to grant the extension to the performance test deadline, and will notify you in writing of approval or disapproval of the request for an extension as soon as practicable. Until an extension of the performance test deadline has been approved by the Administrator, you remain strictly subject to the requirements of this subpart.

(f) After any initial requests in §60.4880 for alternative monitoring requirements for initial compliance, you may subsequently petition the Administrator for alternative monitoring parameters as specified in §§60.13(i) and 60.4880(e).

§60.4890 How do I demonstrate continuous compliance with my operating limits?

You must continuously monitor your operating parameters as specified in paragraph (a) of this section and meet the requirements of paragraphs (b) and (c) of this section, according to the monitoring and calibration requirements in §60.4905. You must confirm and re-establish your operating limits as specified in paragraph (d) of this section.

(a) You must continuously monitor the operating parameters specified in paragraphs (a)(1) and (a)(2) of this section using the continuous monitoring equipment and according to the procedures specified in §60.4905 or established in §60.4855. To determine compliance, you must use the data averaging period specified in Table 3 to this subpart (except for alarm time of the baghouse leak detection system) unless a different averaging period is established under §60.4855.

(1) You must demonstrate that the SSI unit meets the operating limits established according to §§60.4855 and 60.4870 and paragraph (d) of this section for each applicable operating parameter.

(2) You must demonstrate that the SSI unit meets the operating limit for bag leak detection systems as follows:

(i) For a bag leak detection system, you must calculate the alarm time as follows:

(A) If inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted.

(B) If corrective action is required, each alarm time shall be counted as a minimum of 1 hour.

(C) If you take longer than 1 hour to initiate corrective action, each alarm time (i.e., time that the alarm sounds) is counted as the actual amount of time taken by you to initiate corrective action.

(ii) Your maximum alarm time is equal to 5 percent of the operating time during a 6-month period, as specified in §60.4850(c).

(b) Operation above the established maximum, below the established minimum, or outside the allowable range of the operating limits specified in paragraph (a) of this section constitutes a deviation from your operating limits established under this subpart, except during performance tests conducted to determine compliance with the emission and operating limits or to establish new operating limits. You must submit the deviation report specified in §60.4915(e) for each instance that you did not meet one of your operating limits established under this subpart.

(c) You must submit the annual compliance report specified in §60.4915(d) to demonstrate continuous compliance.

(d) You must confirm your operating limits according to paragraph (d)(1) of this section or re-establish operating limits according to paragraph (d)(2) of this section. Your operating limits must be established so as to assure ongoing compliance with the emission limits. These requirements also apply to your operating requirements in your fugitive emissions monitoring plan specified in §60.4850(d).

(1) Your operating limits must be based on operating data recorded during any performance test required in §60.4885(a) or any performance evaluation required in §60.4885(b)(5).
(2) You may conduct a repeat performance test at any time to establish new values for the operating limits to apply from that point forward.

§60.4895 By what date must I conduct annual air pollution control device inspections and make any necessary repairs?

(a) You must conduct an annual inspection of each air pollution control device used to comply with the emission limits, according to §60.4900(c), no later than 12 months following the previous annual air pollution control device inspection.

(b) Within 10 operating days following an air pollution control device inspection, all necessary repairs must be completed unless you obtain written approval from the Administrator establishing a date whereby all necessary repairs of the affected SSI unit must be completed.

PERFORMANCE TESTING, MONITORING, AND CALIBRATION REQUIREMENTS

§60.4900 What are the performance testing, monitoring, and calibration requirements for compliance with the emission limits and standards?

You must meet, as applicable, the performance testing requirements specified in paragraph (a) of this section, the monitoring requirements specified in paragraph (b) of this section, the air pollution control device inspections requirements specified in paragraph (c) of this section, and the bypass stack provisions specified in paragraph (d) of this section.

(a) Performance testing requirements. (1) All performance tests must consist of a minimum of three test runs conducted under conditions representative of normal operations, as specified in §60.8(c). Emissions in excess of the emission limits or standards during periods of startup, shutdown, and malfunction are considered deviations from the applicable emission limits or standards.

(2) You must document that the dry sludge burned during the performance test is representative of the sludge burned under normal operating conditions by:

(i) Maintaining a log of the quantity of sewage sludge burned during the performance test by continuously monitoring and recording the average hourly rate that sewage sludge is fed to the incinerator.

(ii) Maintaining a log of the moisture content of the sewage sludge burned during the performance test by taking grab samples of the sewage sludge fed to the incinerator for each 8 hour period that testing is conducted.

(3) All performance tests must be conducted using the test methods, minimum sampling volume, observation period, and averaging methods specified in Table 1 or 2 to this subpart.

(4) Method 1 at 40 CFR part 60, appendix A-1 must be used to select the sampling location and number of traverse points.

(5) Method 3A or 3B at 40 CFR part 60, appendix A-2 must be used for gas composition analysis, including measurement of oxygen concentration. Method 3A or 3B at 40 CFR part 60, appendix A-2 must be used simultaneously with each method.

(6) All pollutant concentrations must be adjusted to 7 percent oxygen using Equation 1 of this section:

\[ C_{adj} = \frac{C_{mess}(20.9-7)}{(20.9-%O_2)} \]  
(Eq. 1)

Where:

\( C_{adj} \) = Pollutant concentration adjusted to 7 percent oxygen.
\[ C_{\text{meas}} = \text{Pollutant concentration measured on a dry basis.} \]

\[(20.9-7) = 20.9 \text{ percent oxygen−7 percent oxygen (defined oxygen correction basis).}\]

\[20.9 = \text{Oxygen concentration in air, percent.}\]

\[%O_2 = \text{Oxygen concentration measured on a dry basis, percent.}\]

(7) Performance tests must be conducted and data reduced in accordance with the test methods and procedures contained in this subpart unless the Administrator does one of the following.

(i) Specifies or approves, in specific cases, the use of a method with minor changes in methodology.

(ii) Approves the use of an equivalent method.

(iii) Approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

(iv) Waives the requirement for performance tests because you have demonstrated by other means to the Administrator's satisfaction that the affected SSI unit is in compliance with the standard.

(v) Approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph is construed to abrogate the Administrator's authority to require testing under section 114 of the Clean Air Act.

(8) You must provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, you must notify the Administrator as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Administrator by mutual agreement.

(9) You must provide, or cause to be provided, performance testing facilities as follows:

(i) Sampling ports adequate for the test methods applicable to the SSI unit, as follows:

(A) Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures.

(B) Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.

(ii) Safe sampling platform(s).

(iii) Safe access to sampling platform(s).

(iv) Utilities for sampling and testing equipment.

(10) Unless otherwise specified in this subpart, each performance test must consist of three separate runs using the applicable test method. Each run must be conducted for the time and under the conditions specified in the applicable standard. Compliance with each emission limit must be determined by calculating the arithmetic mean of the three runs. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond your control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.
(11) During each test run specified in paragraph (a)(1) of this section, you must operate your sewage sludge incinerator at a minimum of 85 percent of your maximum permitted capacity.

(b) **Continuous monitor requirements.** You must meet the following requirements, as applicable, when using a continuous monitoring system to demonstrate compliance with the emission limits in Table 1 or 2 to this subpart. The option to use a continuous emissions monitoring system for hydrogen chloride, dioxins/furans, cadmium, or lead takes effect on the date a final performance specification applicable to hydrogen chloride, dioxins/furans, cadmium, or lead is published in the [FEDERAL REGISTER](https://www.federalregister.gov). If you elect to use a continuous emissions monitoring system instead of conducting annual performance testing, you must meet the requirements of paragraphs (b)(1) through (b)(6) of this section. If you elect to use a continuous automated sampling system instead of conducting annual performance testing, you must meet the requirements of paragraph (b)(7) of this section. The option to use a continuous automated sampling system for dioxins/furans takes effect on the date a final performance specification for such a continuous automated sampling system is published in the [FEDERAL REGISTER](https://www.federalregister.gov).

(1) You must notify the Administrator one month before starting use of the continuous monitoring system.

(2) You must notify the Administrator one month before stopping use of the continuous monitoring system, in which case you must also conduct a performance test prior to ceasing operation of the system.

(3) You must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the emissions to the atmosphere in accordance with the following:

(i) Section 60.13 of subpart A of this part.

(ii) The following performance specifications of appendix B of this part, as applicable:

(A) For particulate matter, Performance Specification 11 of appendix B of this part.

(B) For hydrogen chloride, Performance Specification 15 of appendix B of this part.

(C) For carbon monoxide, Performance Specification 4B of appendix B of this part with the modifications shown in Tables 1 and 2 to this subpart.

(D) [Reserved]

(E) For mercury, Performance Specification 12A of appendix B of this part.

(F) For nitrogen oxides, Performance Specification 2 of appendix B of this part.

(G) For sulfur dioxide, Performance Specification 2 of appendix B of this part.

(iii) For continuous emissions monitoring systems, the quality assurance procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) of appendix F of this part specified in paragraphs (b)(3)(iii)(A) through (b)(3)(iii)(G) of this section. For each pollutant, the span value of the continuous emissions monitoring system is two times the applicable emission limit, expressed as a concentration.

(A) For particulate matter, Procedure 2 in appendix F of this part.

(B) For hydrogen chloride, Procedure 1 in appendix F of this part except that the Relative Accuracy Test Audit requirements of Procedure 1 shall be replaced with the validation requirements and criteria of sections 11.1.1 and 12.0 of Performance Specification 15 of appendix B of this part.

(C) For carbon monoxide, Procedure 1 in appendix F of this part.

(D) [Reserved]
(E) For mercury, Procedures 5 in appendix F of this part.

(F) For nitrogen oxides, Procedure 1 in appendix F of this part.

(G) For sulfur dioxide, Procedure 1 in appendix F of this part.

(iv) If your monitoring system has a malfunction or out-of-control period, you must complete repairs and resume operation of your monitoring system as expeditiously as possible.

(4) During each relative accuracy test run of the continuous emissions monitoring system using the performance specifications in paragraph (b)(3)(ii) of this section, emission data for each regulated pollutant and oxygen (or carbon dioxide as established in paragraph (b)(5) of this section) must be collected concurrently (or within a 30- to 60-minute period) by both the continuous emissions monitoring systems and the test methods specified in paragraphs (b)(4)(i) through (b)(4)(viii) of this section. Relative accuracy testing must be at representative operating conditions while the SSI unit is charging sewage sludge.

(i) For particulate matter, Method 5 at 40 CFR part 60, appendix A-3 or Method 26A or 29 at 40 CFR part 60, appendix A-8 shall be used.

(ii) For hydrogen chloride, Method 26 or 26A at 40 CFR part 60, appendix A-8, shall be used as specified in Tables 2 and 3 to this subpart.

(iii) For carbon monoxide, Method 10, 10A, or 10B at 40 CFR part 60, appendix A-4, shall be used.

(iv) For dioxins/furans, Method 23 at 40 CFR part 60, appendix A-7, shall be used.

(v) For mercury, cadmium, and lead, Method 29 at 40 CFR part 60, appendix A-8 shall be used. Alternatively for mercury, Method 30B at 40 CFR part 60, appendix A-8 or ASTM D6784-02 (Reapproved 2008) (incorporated by reference, see §60.17), may be used.

(vi) For nitrogen oxides, Method 7 or 7E at 40 CFR part 60, appendix A-4, shall be used.

(vii) For sulfur dioxide, Method 6 or 6C at 40 CFR part 60, appendix A-4, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17) must be used. For sources that have actual inlet emissions less than 100 parts per million dry volume, the relative accuracy criterion for inlet sulfur dioxide continuous emissions monitoring system should be no greater than 20 percent of the mean value of the method test data in terms of the units of the emission standard, or 5 parts per million dry volume absolute value of the mean difference between the method and the continuous emissions monitoring system, whichever is greater.

(viii) For oxygen (or carbon dioxide as established in (b)(5) of this section), Method 3A or 3B at 40 CFR part 60, appendix A-2, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17), as applicable, must be used.

(5) You may request that compliance with the emission limits be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. If carbon dioxide is selected for use in diluent corrections, the relationship between oxygen and carbon dioxide levels must be established during the initial performance test according to the procedures and methods specified in paragraphs (b)(5)(i) through (b)(5)(iv) of this section. This relationship may be re-established during subsequent performance tests.

(i) The fuel factor equation in Method 3B at 40 CFR part 60, appendix A-2 must be used to determine the relationship between oxygen and carbon dioxide at a sampling location. Method 3A or 3B at 50 CFR part 60, appendix A-2, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17), as applicable, must be used to determine the oxygen concentration at the same location as the carbon dioxide monitor.

(ii) Samples must be taken for at least 30 minutes in each hour.
(iii) Each sample must represent a 1-hour average.

(iv) A minimum of three runs must be performed.

(6) You must operate the continuous monitoring system and collect data with the continuous monitoring system as follows:

(i) You must collect data using the continuous monitoring system at all times the affected SSI unit is operating and at the intervals specified in paragraph (b)(6)(i) of this section, except for periods of monitoring system malfunctions that occur during periods specified in §60.4880(a)(7)(i), repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments). Any such periods that you do not collect data using the continuous monitoring system constitute a deviation from the monitoring requirements and must be reported in a deviation report.

(ii) You must collect continuous emissions monitoring system data in accordance with §60.13(e)(2).

(iii) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities conducted during monitoring system malfunctions must not be included in calculations used to report emissions or operating levels. Any such periods must be reported in a deviation report.

(iv) Any data collected during periods when the monitoring system is out of control as specified in §60.4880(a)(7)(i), repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out-of-control periods must not be included in calculations used to report emissions or operating levels. Any such periods that do not coincide with a monitoring system malfunction constitute a deviation from the monitoring requirements and must be reported in a deviation report.

(v) You must use all the data collected during all periods except those periods specified in paragraphs (b)(6)(iii) and (b)(6)(iv) of this section in assessing the operation of the control device and associated control system.

(7) If you elect to use a continuous automated sampling system instead of conducting annual performance testing, you must:

(i) Install, calibrate, maintain, and operate a continuous automated sampling system according to the site-specific monitoring plan developed in §60.58b(p)(1) through (p)(6), (p)(9), (p)(10), and (q).

(ii) Collect data according to §60.58b(p)(5) and paragraph (b)(6) of this section.

(c) Air pollution control device inspections. You must conduct air pollution control device inspections that include, at a minimum, the following:

(1) Inspect air pollution control device(s) for proper operation.

(2) Generally observe that the equipment is maintained in good operating condition.

(3) Develop a site-specific monitoring plan according to the requirements in §60.4880. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under §60.13(i).

(d) Bypass stack. Use of the bypass stack at any time that sewage sludge is being charged to the SSI unit is an emissions standards deviation for all pollutants listed in Table 1 or 2 to this subpart. The use of the bypass stack during a performance test invalidates the performance test.

§60.4905 What are the monitoring and calibration requirements for compliance with my operating limits?

(a) You must install, operate, calibrate, and maintain the continuous parameter monitoring systems according to the requirements in paragraphs (a)(1) and (2) of this section.
(1) Meet the following general requirements for flow, pressure, pH, and operating temperature measurement devices:

(i) You must collect data using the continuous monitoring system at all times the affected SSI unit is operating and at the intervals specified in paragraph (a)(1)(ii) of this section, except for periods of monitoring system malfunctions that occur during periods specified in §60.4880(a)(7)(i), repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments). Any such periods that you do not collect data using the continuous monitoring system constitute a deviation from the monitoring requirements and must be reported in a deviation report.

(ii) You must collect continuous parameter monitoring system data in accordance with §60.13(e)(2).

(iii) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities conducted during monitoring system malfunctions must not be included in calculations used to report emissions or operating levels. Any such periods must be reported in your annual deviation report.

(iv) Any data collected during periods when the monitoring system is out of control as specified in §60.4880(a)(7)(i), repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out-of-control periods must not be included in calculations used to report emissions or operating levels. Any such periods that do not coincide with a monitoring system malfunction, as defined in §60.4930, constitute a deviation from the monitoring requirements and must be reported in a deviation report.

(v) You must use all the data collected during all periods except those periods specified in paragraphs (a)(1)(iii) and (a)(1)(iv) of this section in assessing the operation of the control device and associated control system.

(vi) Record the results of each inspection, calibration, and validation check.

(2) Operate and maintain your continuous monitoring system according to your monitoring plan required under §60.4880. Additionally:

(i) For carrier gas flow rate monitors (for activated carbon injection), during the performance test conducted pursuant to §60.4885, you must demonstrate that the system is maintained within ±5 percent accuracy, according to the procedures in appendix A to part 75 of this chapter.

(ii) For carrier gas pressure drop monitors (for activated carbon injection), during the performance test conducted pursuant to §60.4885, you must demonstrate that the system is maintained within ±5 percent accuracy.

(b) You must operate and maintain your bag leak detection system in continuous operation according to your monitoring plan required under §60.4880. Additionally:

(1) For positive pressure fabric filter systems that do not duct all compartments of cells to a common stack, a bag leak detection system must be installed in each baghouse compartment or cell.

(2) Where multiple bag leak detectors are required, the system's instrumentation and alarm may be shared among detectors.

(3) You must initiate procedures to determine the cause of every alarm within 8 hours of the alarm, and you must alleviate the cause of the alarm within 24 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:

(i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in particulate matter emissions.

(ii) Sealing off defective bags or filter media.
(iii) Replacing defective bags or filter media or otherwise repairing the control device.

(iv) Sealing off a defective fabric filter compartment.

(v) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system.

(vi) Shutting down the process producing the particulate matter emissions.

(c) You must operate and maintain the continuous parameter monitoring systems specified in paragraphs (a) and (b) of this section in continuous operation according to your monitoring plan required under §60.4880.

(d) If your SSI unit has a bypass stack, you must install, calibrate (to manufacturers’ specifications), maintain, and operate a device or method for measuring the use of the bypass stack including date, time, and duration.

RECORDKEEPING AND REPORTING

§60.4910 What records must I keep?

You must maintain the items (as applicable) specified in paragraphs (a) through (n) of this section for a period of at least 5 years. All records must be available on site in either paper copy or computer-readable format that can be printed upon request, unless an alternative format is approved by the Administrator.

(a) Date. Calendar date of each record.

(b) Siting. All documentation produced as a result of the siting requirements of §§60.4800 and 60.4805.

(c) Operator Training. Documentation of the operator training procedures and records specified in paragraphs (c)(1) through (c)(4) of this section. You must make available and readily accessible at the facility at all times for all SSI unit operators the documentation specified in paragraph (c)(1) of this section.

(1) Documentation of the following operator training procedures and information:

(i) Summary of the applicable standards under this subpart.

(ii) Procedures for receiving, handling, and feeding sewage sludge.

(iii) Incinerator startup, shutdown, and malfunction preventative and corrective procedures.

(iv) Procedures for maintaining proper combustion air supply levels.

(v) Procedures for operating the incinerator and associated air pollution control systems within the standards established under this subpart.

(vi) Monitoring procedures for demonstrating compliance with the incinerator operating limits.

(vii) Reporting and recordkeeping procedures.

(viii) Procedures for handling ash.

(ix) A list of the materials burned during the performance test, if in addition to sewage sludge.

(x) For each qualified operator and other plant personnel who may operate the unit according to the provisions of §60.4835(a), the phone and/or pager number at which they can be reached during operating hours.
(2) Records showing the names of SSI unit operators and other plant personnel who may operate the unit according to the provisions of §60.4835(a), as follows:

(i) Records showing the names of SSI unit operators and other plant personnel who have completed review of the information in paragraph (c)(1) of this section as required by §60.4840(b), including the date of the initial review and all subsequent annual reviews.

(ii) Records showing the names of the SSI operators who have completed the operator training requirements under §60.4810, met the criteria for qualification under §60.4820, and maintained or renewed their qualification under §60.4825 or §60.4830. Records must include documentation of training, including the dates of their initial qualification and all subsequent renewals of such qualifications.

(3) Records showing the periods when no qualified operators were accessible for more than 8 hours, but less than 2 weeks, as required in §60.4835(a).

(4) Records showing the periods when no qualified operators were accessible for 2 weeks or more along with copies of reports submitted as required in §60.4835(b).

(d) Air pollution control device inspections. Records of the results of initial and annual air pollution control device inspections conducted as specified in §§60.4875 and 60.4900(c), including any required maintenance and any repairs not completed within 10 days of an inspection or the timeframe established by the Administrator.

(e) Performance test reports. (1) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and standards and/or to establish operating limits, as applicable.

(2) Retain a copy of the complete performance test report, including calculations.

(3) Keep a record of the hourly dry sludge feed rate measured during performance test runs, as specified in §60.4900(a)(2)(i).

(4) Keep any necessary records to demonstrate that the performance test was conducted under conditions representative of normal operations, including a record of the moisture content measured as required in §60.4900(a)(2)(ii) for each grab sample taken of the sewage sludge burned during the performance test.

(f) Continuous monitoring data. Records of the following data, as applicable:

(1) For continuous emissions monitoring systems, all 1-hour average concentrations of particulate matter, hydrogen chloride, carbon monoxide, dioxins/furans total mass basis, mercury, nitrogen oxides, sulfur dioxide, cadmium, and lead emissions.

(2) For continuous automated sampling systems, all average concentrations measured for mercury and dioxins/furans total mass basis at the frequencies specified in your monitoring plan.

(3) For continuous parameter monitoring systems:

(i) All 1-hour average values recorded for the following operating parameters, as applicable:

(A) Combustion chamber operating temperature (or afterburner temperature).

(B) If a wet scrubber is used to comply with the rule, pressure drop across each wet scrubber system, liquid flow rate to each wet scrubber used to comply with the emission limit in Table 1 or 2 to this subpart for particulate matter, cadmium, or lead, and scrubber liquid flow rate and scrubber liquid pH for each wet scrubber used to comply with an emission limit in Table 1 or 2 to this subpart for sulfur dioxide or hydrogen chloride.

(C) If an electrostatic precipitator is used to comply with the rule, secondary voltage and secondary amperage of the electrostatic precipitator collection plates, and effluent water flow rate at the outlet of the wet electrostatic precipitator.
(D) If activated carbon injection is used to comply with the rule, sorbent flow rate and carrier gas flow rate or pressure drop, as applicable.

(ii) All daily average values recorded for the feed rate and moisture content of the sewage sludge fed to the sewage sludge incinerator, monitored and calculated as specified in §60.4850(f).

(iii) If a fabric filter is used to comply with the rule, the date, time, and duration of each alarm and the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. You must also record the percent of operating time during each 6-month period that the alarm sounds, calculated as specified in §60.4890.

(iv) For other control devices for which you must establish operating limits under §60.4855, you must maintain data collected for all operating parameters used to determine compliance with the operating limits, at the frequencies specified in your monitoring plan.

(g) Other records for continuous monitoring systems. You must keep the following records, as applicable:

1. Keep records of any notifications to the Administrator in §60.4915(h)(1) of starting or stopping use of a continuous monitoring system for determining compliance with any emissions limit.

2. Keep records of any requests under §60.4900(b)(5) that compliance with the emission limits be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen.

3. If activated carbon injection is used to comply with the rule, the type of sorbent used and any changes in the type of sorbent used.

(h) Deviation Reports. Records of any deviation reports submitted under §60.4915(e) and (f).

(i) Equipment specifications and operation and maintenance requirements. Equipment specifications and related operation and maintenance requirements received from vendors for the incinerator, emission controls, and monitoring equipment.

(j) Inspections, calibrations, and validation checks of monitoring devices. Records of inspections, calibrations, and validations checks of any monitoring devices as required under §§60.4900 and 60.4905.

(k) Monitoring plan and performance evaluations for continuous monitoring systems. Records of the monitoring plans required under §60.4880, and records of performance evaluations required under §60.4885(b)(5).

(l) Less frequent testing. If, consistent with 60.4885(a)(3), you elect to conduct performance tests less frequently than annually, you must keep annual records that document that your emissions in the 2 previous consecutive years were at or below 75 percent of the applicable emission limit in Table 1 or 2 to this subpart, and document that there were no changes in source operations or air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past 2 years.

(m) Use of bypass stack. Records indicating use of the bypass stack, including dates, times, and durations as required under §60.4905(d).

(n) If a malfunction occurs, you must keep a record of the information submitted in your annual report in §60.4915(d)(16).

§60.4915   What reports must I submit?

You must submit the reports specified in paragraphs (a) through (j) of this section. See Table 5 to this subpart for a summary of these reports.
(a) **Notification of construction.** You must submit a notification prior to commencing construction that includes the four items listed in paragraphs (a)(1) through (a)(4) of this section:

1. A statement of intent to construct.

2. The anticipated date of commencement of construction.

3. All documentation produced as a result of the siting requirements of §60.4805.

4. Anticipated date of initial startup.

(b) **Notification of initial startup.** You must submit the information specified in paragraphs (b)(1) through (b)(5) of this section prior to initial startup:

1. The maximum design dry sludge burning capacity.

2. The anticipated and permitted maximum dry sludge feed rate.

3. If applicable, the petition for site-specific operating limits specified in §60.4855.

4. The anticipated date of initial startup.

5. The site-specific monitoring plan required under §60.4880, at least 60 days before your initial performance evaluation of your continuous monitoring system.

6. The site-specific monitoring plan for your ash handling system required under §60.4880, at least 60 days before your initial performance test to demonstrate compliance with your fugitive ash emission limit.

(c) **Initial compliance report.** You must submit the following information no later than 60 days following the initial performance test:

1. Company name, physical address, and mailing 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.

4. The complete test report for the initial performance test results obtained by using the test methods specified in Table 1 or 2 to this subpart.

5. If an initial performance evaluation of a continuous monitoring system was conducted, the results of that initial performance evaluation.

6. The values for the site-specific operating limits established pursuant to §§60.4850 and 60.4855 and the calculations and methods, as applicable, used to establish each operating limit.

7. If you are using a fabric filter to comply with the emission limits, documentation that a bag leak detection system has been installed and is being operated, calibrated, and maintained as required by §60.4850(b).

8. The results of the initial air pollution control device inspection required in §60.4875, including a description of repairs.

(d) **Annual compliance report.** You must submit an annual compliance report that includes the items listed in paragraphs (d)(1) through (d)(16) of this section for the reporting period specified in paragraph (d)(3) of this section.
You must submit your first annual compliance report no later than 12 months following the submission of the initial compliance report in paragraph (c) of this section. You must submit subsequent annual compliance reports no more than 12 months following the previous annual compliance report. (You may be required to submit these reports (or additional compliance information) more frequently by the title V operating permit required in §60.4920.)

(1) Company name, physical address, and mailing 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 a performance test was conducted during the reporting period, the results of that performance test.
   
   (i) If operating limits were established during the performance test, include the value for each operating limit and, as applicable, the method used to establish each operating limit, including calculations.
   
   (ii) If activated carbon is used during the performance test, include the type of activated carbon used.

(5) For each pollutant and operating parameter recorded using a continuous monitoring system, the highest average value and lowest average value recorded during the reporting period, as follows:
   
   (i) For continuous emission monitoring systems and continuous automated sampling systems, report the highest and lowest 24-hour average emission value.
   
   (ii) For continuous parameter monitoring systems, report the following values:
      
      (A) For all operating parameters except scrubber liquid pH, the highest and lowest 12-hour average values.
      
      (B) For scrubber liquid pH, the highest and lowest 3-hour average values.

(6) If there are no deviations during the reporting period from any emission limit, emission standard, or operating limit that applies to you, a statement that there were no deviations from the emission limits, emission standard, or operating limits.

(7) Information for bag leak detection systems recorded under §60.4910(f)(3)(iii).

(8) If a performance evaluation of a continuous monitoring system was conducted, the results of that performance evaluation. If new operating limits were established during the performance evaluation, include your calculations for establishing those operating limits.

(9) If you elect to conduct performance tests less frequently as allowed in §60.4885(a)(3) and did not conduct a performance test during the reporting period, you must include the dates of the last two performance tests, a comparison of the emission level you achieved in the last two performance tests to the 75 percent emission limit threshold specified in §60.4885(a)(3), and a statement as to whether there have been any process changes and whether the process change resulted in an increase in emissions.

(10) Documentation of periods when all qualified SSI unit operators were unavailable for more than 8 hours, but less than 2 weeks.

(11) Results of annual air pollution control device inspections recorded under §60.4910(d) for the reporting period, including a description of repairs.

(12) If there were no periods during the reporting period when your continuous monitoring systems had a malfunction, a statement that there were no periods during which your continuous monitoring systems had a malfunction.
(13) If there were no periods during the reporting period when a continuous monitoring system was out of control, a statement that there were no periods during which your continuous monitoring system was out of control.

(14) If there were no operator training deviations, a statement that there were no such deviations during the reporting period.

(15) If you did not make revisions to your site-specific monitoring plan during the reporting period, a statement that you did not make any revisions to your site-specific monitoring plan during the reporting period. If you made revisions to your site-specific monitoring plan during the reporting period, a copy of the revised plan.

(16) 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 that occurred during the reporting period and that 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 §60.11(d), including actions taken to correct a malfunction.

(e) Deviation reports. (1) You must submit a deviation report if:

(i) Any recorded operating parameter level, based on the averaging time specified in Table 3 to this subpart, is above the maximum operating limit or below the minimum operating limit established under this subpart.

(ii) The bag leak detection system alarm sounds for more than 5 percent of the operating time for the 6-month reporting period.

(iii) Any recorded 24-hour block average emissions level is above the emission limit, if a continuous monitoring system is used to comply with an emission limit.

(iv) There are visible emissions of combustion ash from an ash conveying system for more than 5 percent of the hourly observation period.

(v) A performance test was conducted that deviated from any emission limit in Table 1 or 2 to this subpart.

(vi) A continuous monitoring system was out of control.

(vii) You had a malfunction (e.g., continuous monitoring system malfunction) that caused or may have caused any applicable emission limit to be exceeded.

(2) The deviation report must be submitted by August 1 of that year for data collected during the first half of the calendar year (January 1 to June 30), and by February 1 of the following year for data you collected during the second half of the calendar year (July 1 to December 31).

(3) For each deviation where you are using a continuous monitoring system to comply with an associated emission limit or operating limit, report the items described in paragraphs (e)(3)(i) through (e)(3)(viii) of this section.

(i) Company name, physical address, and mailing address.

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

(iii) The calendar dates and times your unit deviated from the emission limits, emission standards, or operating limits requirements.

(iv) The averaged and recorded data for those dates.

(v) Duration and cause of each deviation from the following:
(A) Emission limits, emission standards, operating limits, and your corrective actions.

(B) Bypass events and your corrective actions.

(vi) Dates, times, and causes for monitor downtime incidents.

(vii) A copy of the operating parameter monitoring data during each deviation and any test report that documents the emission levels.

(viii) If there were periods during which the continuous monitoring system malfunctioned or was out of control, you must include the following information for each deviation from an emission limit or operating limit:

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

(B) The date, time, and duration that each continuous monitoring system was inoperative, except for zero (low-level) and high-level checks.

(C) The date, time, and duration that each continuous monitoring system was out of control, including start and end dates and hours and descriptions of corrective actions taken.

(D) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction, during a period when the system as out of control, or during another period.

(E) 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.

(F) 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.

(G) A summary of the total duration of continuous monitoring system downtime during the reporting period, and the total duration of continuous monitoring system downtime as a percent of the total operating time of the SSI unit at which the continuous monitoring system downtime occurred during that reporting period.

(H) An identification of each parameter and pollutant that was monitored at the SSI unit.

(I) A brief description of the SSI unit.

(J) A brief description of the continuous monitoring system.

(K) The date of the latest continuous monitoring system certification or audit.

(L) A description of any changes in continuous monitoring system, processes, or controls since the last reporting period.

(4) For each deviation where you are not using a continuous monitoring system to comply with the associated emission limit or operating limit, report the following items:

(i) Company name, physical address, and mailing address.

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

(iii) The total operating time of each affected SSI during the reporting period.
(iv) The calendar dates and times your unit deviated from the emission limits, emission standards, or operating limits requirements.

(v) The averaged and recorded data for those dates.

(vi) Duration and cause of each deviation from the following:

(A) Emission limits, emission standard, and operating limits, and your corrective actions.

(B) Bypass events and your corrective actions.

(vii) A copy of any performance test report that showed a deviation from the emission limits or standard.

(viii) A brief description of any malfunction reported in paragraph (e)(1)(vii) of this section, including a description of actions taken during the malfunction to minimize emissions in accordance with 60.11(d) and to correct the malfunction.

(f) Qualified operator deviation.

(1) If all qualified operators are not accessible for 2 weeks or more, you must take the two actions in paragraphs (f)(1)(i) and (f)(1)(ii) of this section.

(i) Submit a notification of the deviation within 10 days that includes the three items in paragraphs (f)(1)(i)(A) through (f)(1)(i)(C) of this section.

(A) A statement of what caused the deviation.

(B) A description of actions taken to ensure that a qualified operator is accessible.

(C) The date when you anticipate that a qualified operator will be available.

(ii) Submit a status report to the Administrator every 4 weeks that includes the three items in paragraphs (f)(1)(ii)(A) through (f)(1)(ii)(C) of this section.

(A) A description of actions taken to ensure that a qualified operator is accessible.

(B) The date when you anticipate that a qualified operator will be accessible.

(C) Request for approval from the Administrator to continue operation of the SSI unit.

(2) If your unit was shut down by the Administrator, under the provisions of §60.4835(b)(2)(i), due to a failure to provide an accessible qualified operator, you must notify the Administrator within 5 days of meeting §60.4835(b)(2)(ii) that you are resuming operation.

(g) Notification of a force majeure. If a force majeure is about to occur, occurs, or has occurred for which you intend to assert a claim of force majeure:

(1) You must notify the Administrator, in writing as soon as practicable following the date you first knew, or through due diligence should have known that the event may cause or caused a delay in conducting a performance test beyond the regulatory deadline, but the notification must occur before the performance test deadline unless the initial force majeure or a subsequent force majeure event delays the notice, and in such cases, the notification must occur as soon as practicable.

(2) You must provide to the Administrator a written description of the force majeure event and a rationale for attributing the delay in conducting the performance test beyond the regulatory deadline to the force majeure; describe
the measures taken or to be taken to minimize the delay; and identify a date by which you propose to conduct the performance test.

(h) **Other notifications and reports required.** You must submit other notifications as provided by §60.7 and as follows:

(1) You must notify the Administrator 1 month before starting or stopping use of a continuous monitoring system for determining compliance with any emission limit.

(2) You must notify the Administrator at least 30 days prior to any performance test conducted to comply with the provisions of this subpart, to afford the Administrator the opportunity to have an observer present.

(3) As specified in §60.4900(a)(8), you must notify the Administrator at least 7 days prior to the date of a rescheduled performance test for which notification was previously made in paragraph (h)(2) of this section.

(i) **Report submission form.** (1) Submit initial, annual, and deviation reports electronically or in paper format, postmarked on or before the submittal due dates.

(2) As of January 1, 2012 and within 60 days after the date of completing each performance test, as defined in §63.2, conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit (i.e., reference method) data and performance test (i.e., compliance test) data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see http://www.epa.gov/ttn/chieft/ert/ert_tool.html/) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

(j) **Changing report dates.** If the Administrator agrees, you may change the semi-annual or annual reporting dates. See §60.19(c) for procedures to seek approval to change your reporting date.

**TITLE V OPERATING PERMITS**

§60.4920 Am I required to apply for and obtain a title V operating permit for my unit?

Yes, if you are subject to this subpart, you are required to apply for and obtain a Title V operating permit unless you meet the relevant requirements for an exemption specified in §60.4780.

§60.4925 When must I submit a title V permit application for my new SSI unit?

(a) If your new SSI unit subject to this subpart is not subject to an earlier permit application deadline, a complete Title V permit application must be submitted on or before one of the dates specified in paragraph (a)(1) or (a)(2) of this section. (See section 503(c) of the Clean Air Act and 40 CFR 70.5(a)(1)(i) and 40 CFR 71.5(a)(1)(i)).

(1) For a SSI unit that commenced operation as a new SSI unit as of March 21, 2011, then a complete title V permit application must be submitted not later than March 21, 2012.

(2) For a SSI unit that does not commence operation as a new SSI unit until after March 21, 2011, then a complete title V permit application must be submitted not later than 12 months after the date the unit commences operation as a new source.

(b) If your new SSI unit subject to this subpart is subject to title V as a result of some triggering requirement(s) other than this subpart (for example, a unit subject to this subpart may be a major source or part of a major source), then your unit may be required to apply for a title V permit prior to the deadlines specified in paragraph (a) of this section. If more than one requirement triggers a source’s obligation to apply for a title V permit, the 12-month timeframe for filing a title V permit application is triggered by the requirement that first causes the source to be subject to title V. (See section 503(c) of the Clean Air Act and 40 CFR 70.3(a) and (b), 40 CFR 70.5(a)(1)(i), 40 CFR 71.3(a) and (b), and 40 CFR 71.5(a)(1)(i).)
(c) A “complete” title V permit application is one that has been determined or deemed complete by the relevant permitting authority under section 503(d) of the Clean Air Act and 40 CFR 70.5(a)(2) or 40 CFR 71.5(a)(2). You must submit a complete permit application by the relevant application deadline in order to operate after this date in compliance with Federal law. (See sections 503(d) and 502(a) of the Clean Air Act and 40 CFR 70.7(b) and 40 CFR 71.7(b).)

DEFINITIONS

§60.4930 What definitions must I know?

Terms used but not defined in this subpart are defined in the Clean Air Act and §60.2.

Affected source means a sewage sludge incineration unit as defined in §60.4930.

Affirmative defense means, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

Auxiliary fuel means natural gas, liquefied petroleum gas, fuel oil, or diesel fuel.

Bag leak detection system means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (i.e., baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

Bypass stack means a device used for discharging combustion gases to avoid severe damage to the air pollution control device or other equipment.

Calendar year means 365 consecutive days starting on January 1 and ending on December 31.

Continuous automated sampling system means the total equipment and procedures for automated sample collection and sample recovery/analysis to determine a pollutant concentration or emission rate by collecting a single integrated sample(s) or multiple integrated sample(s) of the pollutant (or diluent gas) for subsequent on- or off-site analysis; integrated sample(s) collected are representative of the emissions for the sample time as specified by the applicable requirement.

Continuous emissions monitoring system means a monitoring system for continuously measuring and recording the emissions of a pollutant from an affected facility.

Continuous monitoring system (CMS) means a continuous emissions monitoring system, continuous automated sampling system, continuous parameter monitoring system, or other manual or automatic monitoring that is used for demonstrating compliance with an applicable regulation on a continuous basis as defined by this subpart. The term refers to the total equipment used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters.

Continuous parameter monitoring system means a monitoring system for continuously measuring and recording operating conditions associated with air pollution control device systems (e.g., operating temperature, pressure, and power).

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 limit, operating limit, or operator qualification and accessibility requirements.
(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.

*Dioxins/furans* means tetra- through octachlorinated dibenzo-p-dioxins and dibenzofurans.

*Electrostatic precipitator or wet electrostatic precipitator* means an air pollution control device that uses both electrical forces and, if applicable, water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

*Existing sewage sludge incineration unit* means a sewage sludge incineration unit the construction of which is commenced on or before October 14, 2010.

*Fabric filter* means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse.

*Fluidized bed incinerator* means an enclosed device in which organic matter and inorganic matter in sewage sludge are combusted in a bed of particles suspended in the combustion chamber gas.

*Malfunction* means any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused, in part, by poor maintenance or careless operation are not malfunctions.

*Modification* means a change to an existing SSI unit later than September 21, 2011 and that meets one of two criteria:

1. The cumulative cost of the changes over the life of the unit exceeds 50 percent of the original cost of building and installing the SSI unit (not including the cost of land) updated to current costs (current dollars). To determine what systems are within the boundary of the SSI unit used to calculate these costs, see the definition of SSI unit.

2. Any physical change in the SSI unit or change in the method of operating it that increases the amount of any air pollutant emitted for which section 129 or section 111 of the Clean Air Act has established standards.

*Modified sewage sludge incineration (SSI) unit* means an existing SSI unit that undergoes a modification, as defined in this section.

*Multiple hearth incinerator* means a circular steel furnace that contains a number of solid refractory hearths and a central rotating shaft; rabble arms that are designed to slowly rake the sludge on the hearth are attached to the rotating shaft. Dewatered sludge enters at the top and proceeds downward through the furnace from hearth to hearth, pushed along by the rabble arms.

*New sewage sludge incineration unit* means a SSI unit the construction of which is commenced after October 14, 2010 which would be applicable to such unit or a modified solid waste incineration unit.

*Operating day* means a 24-hour period between 12:00 midnight and the following midnight during which any amount of sewage sludge is combusted at any time in the SSI unit.

*Particulate matter* means filterable particulate matter emitted from SSI units as measured by Method 5 at 40 CFR part 60, appendix A-3 or Methods 26A or 29 at 40 CFR part 60, appendix A-8.

*Power input to the electrostatic precipitator* means the product of the test-run average secondary voltage and the test-run average secondary amperage to the electrostatic precipitator collection plates.

*Process change* means a significant permit revision, but only with respect to those pollutant-specific emission units for which the proposed permit revision is applicable, including but not limited to:
(1) A change in the process employed at the wastewater treatment facility associated with the affected SSI unit (e.g., the addition of tertiary treatment at the facility, which changes the method used for disposing of process solids and processing of the sludge prior to incineration).

(2) A change in the air pollution control devices used to comply with the emission limits for the affected SSI unit (e.g., change in the sorbent used for activated carbon injection).

Sewage sludge means solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incineration unit or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

Sewage sludge feed rate means the rate at which sewage sludge is fed into the incinerator unit.

Sewage sludge incineration (SSI) unit means an incineration unit combusting sewage sludge for the purpose of reducing the volume of the sewage sludge by removing combustible matter. Sewage sludge incineration unit designs include fluidized bed and multiple hearth. A SSI unit also includes, but is not limited to, the sewage sludge feed system, auxiliary fuel feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The SSI unit includes all ash handling systems connected to the bottom ash handling system. The combustion unit bottom ash system ends at the truck loading station or similar equipment that transfers the ash to final disposal. The SSI unit does not include air pollution control equipment or the stack.

Shutdown means the period of time after all sewage sludge has been combusted in the primary chamber.

Solid waste means any garbage, refuse, sewage sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1342), or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C. 2014).

Standard conditions, when referring to units of measure, means a temperature of 68 °F (20 °C) and a pressure of 1 atmosphere (101.3 kilopascals).

Startup means the period of time between the activation, including the firing of fuels (e.g., natural gas or distillate oil), of the system and the first feed to the unit.

Toxic equivalency means the product of the concentration of an individual dioxin isomer in an environmental mixture and the corresponding estimate of the compound-specific toxicity relative to tetrachlorinated dibenzo-p-dioxin, referred to as the toxic equivalency factor for that compound. Table 4 to this subpart lists the toxic equivalency factors.

Wet scrubber means an add-on air pollution control device that utilizes an aqueous or alkaline scrubbing liquid to collect particulate matter (including nonvaporous metals and condensed organics) and/or to absorb and neutralize acid gases.

You means the owner or operator of a SSI unit that meets the criteria in §60.4770.

Table 1 to Subpart LLLL of Part 60—Emission Limits and Standards for New Fluidized Bed Sewage Sludge Incineration Units

<table>
<thead>
<tr>
<th>For the air pollutant</th>
<th>You must meet this emission limit</th>
<th>Using these averaging methods and minimum sampling volumes or durations</th>
<th>And determining compliance using this method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance</td>
<td>Concentration</td>
<td>Measurement Details</td>
<td>Performance Test Details</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>--------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Particulate matter</td>
<td>9.6 milligrams per dry standard cubic meter</td>
<td>3-run average (collect a minimum volume of 1 dry standard cubic meters per run)</td>
<td>Performance test (Method 5 at 40 CFR part 60, appendix A-3; Method 26A or Method 29 at 40 CFR part 60, appendix A-8).</td>
</tr>
<tr>
<td>Hydrogen chloride</td>
<td>0.24 parts per million by dry volume</td>
<td>3-run average (Collect a minimum volume of 1 dry standard cubic meters per run)</td>
<td>Performance test (Method 26A at 40 CFR part 60, appendix A-8).</td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td>27 parts per million by dry volume</td>
<td>24-hour block average (using 1-hour averages of data).</td>
<td>Continuous emissions monitoring system. (Performance Specification 4B of this part, using a low-range span of 100 ppm and a high-range span of 1000 ppm, and a RA of 0.5 ppm instead of 5 ppm specified in section 13.2. For the cylinder gas audit of Procedure 1, ±15% or 0.5 whichever is greater).</td>
</tr>
<tr>
<td>Dioxins/furans (total mass basis); or Dioxins/furans (toxic equivalency basis)</td>
<td>0.013 nanograms per dry standard cubic meter</td>
<td>3-run average (collect a minimum volume of 3 dry standard cubic meters per run)</td>
<td>Performance test (Method 23 at 40 CFR part 60, appendix A-7).</td>
</tr>
<tr>
<td>Mercury</td>
<td>0.0010 milligrams per dry standard cubic meter</td>
<td></td>
<td>Performance test (Method 29 at 40 CFR part 60, appendix A-8; Method 30B at 40 CFR part 60, appendix A-8; or ASTM D6784-02 (Reapproved 2008).</td>
</tr>
<tr>
<td>Oxides of nitrogen</td>
<td>30 parts per million by dry volume</td>
<td>3-run average (Collect sample for a minimum duration of one hour per run)</td>
<td>Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).</td>
</tr>
<tr>
<td>Sulfur dioxide</td>
<td>5.3 parts per million by dry volume</td>
<td>3-run average (For Method 6, collect a minimum volume of 100 liters per run. For Method 6C, sample for a minimum duration of one hour per run)</td>
<td>Performance test (Method 6 or 6C at 40 CFR part 40, appendix A-4; or ANSI/ASME PTC 19.10-1981.c)</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.0011 milligrams per dry standard cubic meter</td>
<td>3-run average (collect a minimum volume of 1 dry standard cubic meters per run)</td>
<td>Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use GFAAS or ICP/MS for the analytical finish.</td>
</tr>
<tr>
<td>Lead</td>
<td>0.00062 milligrams per dry standard cubic meter</td>
<td>3-run average (collect a minimum volume of 3 dry standard cubic meters per run)</td>
<td>Performance test (Method 29 at 40 CFR part 60, appendix A-8. Use GFAAS or ICP/MS for the analytical finish.</td>
</tr>
<tr>
<td>Fugitive emissions from ash handling</td>
<td>Visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) for no more than 5 percent of the hourly observation period</td>
<td>Three 1-hour observation periods</td>
<td>Visible emission test (Method 22 of appendix A-7 of this part).</td>
</tr>
</tbody>
</table>
All emission limits are measured at 7 percent oxygen, dry basis at standard conditions.

You have the option to comply with either the dioxin/furan emission limit on a total mass basis or the dioxin/furan emission limit on a toxic equivalency basis.

Incorporated by reference, see §60.17.

Table 2 to Subpart LLLL of Part 60—Emission Limits and Standards for New Multiple Hearth Sewage Sludge Incineration Units

<table>
<thead>
<tr>
<th>For the air pollutant</th>
<th>You must meet this emission limit</th>
<th>Using these averaging methods and minimum sampling volumes or durations</th>
<th>And determining compliance using this method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate matter</td>
<td>60 milligrams per dry standard cubic meter</td>
<td>3-run average (collect a minimum volume of 0.75 dry standard cubic meters per run)</td>
<td>Performance test (Method 5 at 40 CFR part 60, appendix A-3; Method 26A or Method 29 at 40 CFR part 60, appendix A-8).</td>
</tr>
<tr>
<td>Hydrogen chloride</td>
<td>1.2 parts per million by dry volume</td>
<td>3-run average (For Method 26, collect a minimum volume of 200 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meters per run)</td>
<td>Performance test (Method 26 or 26A at 40 CFR part 60, appendix A-8).</td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td>52 parts per million by dry volume</td>
<td>24-hour block average (using 1-hour averages of data)</td>
<td>Continuous emissions monitoring system. (Performance Specification 4B of this part, using a low-range span of 100 ppm and a high-range span of 1000 ppm, and a relative accuracy of 0.5 ppm instead of 5 ppm specified in section 13.2. For the cylinder gas audit of Procedure 1, ±15% or 0.5 whichever is greater).</td>
</tr>
<tr>
<td>Dioxins/furans (total mass basis); or Dioxins/furans (toxic equivalency basis)</td>
<td>0.045 nanograms per dry standard cubic meter (total mass basis); or 0.0022 nanograms per dry standard cubic meter (toxic equivalency basis)</td>
<td>3-run average (collect a minimum volume of 3 dry standard cubic meters per run)</td>
<td>Performance test (Method 23 at 40 CFR part 60, appendix A-7).</td>
</tr>
<tr>
<td>Mercury</td>
<td>0.15 milligrams per dry standard cubic meter</td>
<td>3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008), collect a minimum volume of 1 dry standard cubic meters per run. For Method 30B, collect a minimum sample as specified in Method 30B at 40 CFR part 60, appendix A-8)</td>
<td>Performance test (Method 29 at 40 CFR part 60, appendix A-8; Method 30B at 40 CFR part 60, appendix A-8; or ASTM D6784-02 (Reapproved 2008)).</td>
</tr>
<tr>
<td>Oxides of nitrogen</td>
<td>210 parts per million by dry volume</td>
<td>3-run average (Collect sample for a minimum duration of one hour per run)</td>
<td>Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).</td>
</tr>
<tr>
<td>Sulfur dioxide</td>
<td>26 parts per million by dry volume</td>
<td>3-run average (For Method 6, collect a minimum volume of 200 liters per run. For Method 6C, Performance test (Method 6 or 6C at 40 CFR part 40, appendix A-4; or ANSI/ASME PTC 19.10-1981).</td>
<td></td>
</tr>
</tbody>
</table>
Cadmium
- 0.0024 milligrams per dry standard cubic meter
- 3-run average (collect a minimum volume of 1 dry standard cubic meters per run)
- Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use GFAAS or ICP/MS for the analytical finish.

Lead
- 0.0035 milligrams per dry standard cubic meter
- 3-run average (collect a minimum volume of 1 dry standard cubic meters per run)
- Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use GFAAS or ICP/MS for the analytical finish.

Fugitive emissions from ash handling
- Visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) for no more than 5 percent of the hourly observation period
- Three 1-hour observation periods
- Visible emission test (Method 22 of appendix A-7 of this part).

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*a All emission limits are measured at 7 percent oxygen, dry basis at standard conditions.

*b You have the option to comply with either the dioxin/furan emission limit on a total mass basis or the dioxin/furan emission limit on a toxic equivalency basis.

*c Incorporated by reference, see §60.17.

Table 3 to Subpart LLLL of Part 60—Operating Parameters for New Sewage Sludge Incineration Units*

<table>
<thead>
<tr>
<th>For these operating parameters</th>
<th>You must establish these operating limits</th>
<th>And monitor using these minimum frequencies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Data measurement</td>
</tr>
<tr>
<td>All sewage sludge incineration units</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combustion chamber operating temperature or afterburner temperature</td>
<td>Minimum combustion chamber operating temperature or afterburner temperature</td>
<td>Continuous</td>
</tr>
<tr>
<td>Fugitive emissions from ash handling</td>
<td>Site-specific operating requirements</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

**Scrubber**

|                                | Minimum pressure drop | Continuous | Every 15 minutes | 12-hour block. |
| Scrubber liquid flow rate      | Minimum flow rate     | Continuous | Every 15 minutes | 12-hour block. |
| Scrubber liquid pH             | Minimum pH            | Continuous | Every 15 minutes | 3-hour block. |

**Fabric Filter**

| Alarm time of the bag leak detection system alarm | Maximum alarm time of the bag leak detection system alarm (this operating limit is provided in §60.4850 and is not established on a site-specific basis). |

**Electrostatic precipitator**

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<sup>a</sup> All emission limits are measured at 7 percent oxygen, dry basis at standard conditions.

<sup>b</sup> You have the option to comply with either the dioxin/furan emission limit on a total mass basis or the dioxin/furan emission limit on a toxic equivalency basis.

<sup>c</sup> Incorporated by reference, see §60.17.
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Measurement</th>
<th>Frequency</th>
<th>Block Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary voltage of the electrostatic precipitator collection plates</td>
<td>Minimum power input to the electrostatic precipitator collection plates</td>
<td>Continuous</td>
<td>Hourly</td>
</tr>
<tr>
<td>Secondary amperage of the electrostatic precipitator collection plates</td>
<td></td>
<td></td>
<td>12-hour block.</td>
</tr>
<tr>
<td>Effluent water flow rate at the outlet of the electrostatic precipitator</td>
<td>Minimum effluent water flow rate at the outlet of the electrostatic precipitator</td>
<td>Hourly</td>
<td>Hourly</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12-hour block.</td>
</tr>
</tbody>
</table>

**Activated carbon injection**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Measurement</th>
<th>Frequency</th>
<th>Block Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury sorbent injection rate</td>
<td>Minimum mercury sorbent injection rate</td>
<td>Hourly</td>
<td>Hourly</td>
</tr>
<tr>
<td>Dioxin/furan sorbent injection rate</td>
<td>Minimum dioxin/furan sorbent injection rate</td>
<td></td>
<td>12-hour block.</td>
</tr>
<tr>
<td>Carrier gas flow rate or carrier gas pressure drop</td>
<td>Minimum carrier gas flow rate or minimum carrier gas pressure drop</td>
<td>Continuous</td>
<td>Every 15 minutes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12-hour block.</td>
</tr>
</tbody>
</table>

\(a\) As specified in §60.4870, you may use a continuous emissions monitoring system or continuous automated sampling system in lieu of establishing certain operating limits.

\(b\) This recording time refers to the minimum frequency that the continuous monitor or other measuring device initially records data. For all data recorded every 15 minutes, you must calculate hourly arithmetic averages. For all parameters, you use hourly averages to calculate the 12-hour or 3-hour block average specified in this table for demonstrating compliance. You maintain records of 1-hour averages.

**Table 4 to Subpart LLLL of Part 60—Toxic Equivalency Factors**

<table>
<thead>
<tr>
<th>Dioxin/furan isomer</th>
<th>Toxic equivalency factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,3,7,8-tetrachlorinated dibenzo-p-dioxin</td>
<td>1</td>
</tr>
<tr>
<td>1,2,3,7,8-pentachlorinated dibenzo-p-dioxin</td>
<td>1</td>
</tr>
<tr>
<td>1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin</td>
<td>0.1</td>
</tr>
<tr>
<td>1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin</td>
<td>0.1</td>
</tr>
<tr>
<td>1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin</td>
<td>0.1</td>
</tr>
<tr>
<td>1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin</td>
<td>0.01</td>
</tr>
<tr>
<td>Octachlorinated dibenzo-p-dioxin</td>
<td>0.0003</td>
</tr>
<tr>
<td>2,3,7,8-tetrachlorinated dibenzofuran</td>
<td>0.1</td>
</tr>
<tr>
<td>2,3,4,7,8-pentachlorinated dibenzofuran</td>
<td>0.3</td>
</tr>
<tr>
<td>1,2,3,7,8-pentachlorinated dibenzofuran</td>
<td>0.03</td>
</tr>
<tr>
<td>1,2,3,4,7,8-hexachlorinated dibenzofuran</td>
<td>0.1</td>
</tr>
<tr>
<td>1,2,3,6,7,8-hexachlorinated dibenzofuran</td>
<td>0.1</td>
</tr>
<tr>
<td>1,2,3,7,8,9-hexachlorinated dibenzofuran</td>
<td>0.1</td>
</tr>
<tr>
<td>2,3,4,6,7,8-hexachlorinated dibenzofuran</td>
<td>0.1</td>
</tr>
</tbody>
</table>
Table 5 to Subpart LLLL of Part 60—Summary of Reporting Requirements for New Sewage Sludge Incineration Unitsa

<table>
<thead>
<tr>
<th>Report</th>
<th>Due date</th>
<th>Contents</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notification of construction</td>
<td>Prior to commencing construction</td>
<td>1. Statement of intent to construct</td>
<td>§60.4915(a).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Anticipated date of commencement of construction.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Documentation for siting requirements.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Anticipated date of initial startup.</td>
<td></td>
</tr>
<tr>
<td>Notification of initial startup</td>
<td>Prior to initial startup</td>
<td>1. Maximum design dry sewage sludge burning capacity</td>
<td>§60.4915(b).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Anticipated and permitted maximum feed rate.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. If applicable, the petition for site-specific operating limits.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Anticipated date of initial startup.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Site-specific monitoring plan.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. The site-specific monitoring plan for your ash handling system.</td>
<td></td>
</tr>
<tr>
<td>Initial compliance report</td>
<td>No later than 60 days following the initial performance test</td>
<td>1. Company name and address</td>
<td>§60.4915(c).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Statement by a responsible official, with that official's name, title,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>and signature, certifying the accuracy of the content of the report.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Date of report.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Results of CMSb performance evaluation.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. The values for the site-specific operating limits and the calculations</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>and methods, as applicable, used to establish each operating limit.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>7. Documentation of installation of bag leak detection system for fabric</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>filter.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. Results of initial air pollution control device inspection, including</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>a description of repairs.</td>
<td></td>
</tr>
<tr>
<td>Annual compliance report</td>
<td>No later than 12 months following the submission of the initial compliance report; subsequent reports are to be submitted no more than 12 months following the previous report</td>
<td>1. Company name and address</td>
<td>§§60.4915(d).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Statement and signature by responsible official.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Date and beginning and ending dates of report.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. If a performance test was conducted during the reporting period, the results of the test, including any new operating limits and associated calculations and the type of activated carbon used, if applicable.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. For each pollutant and operating</td>
<td></td>
</tr>
<tr>
<td>Parameter recorded using a CMS, the highest recorded 3-hour average and the lowest recorded 3-hour average, as applicable.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. If no deviations from emission limits, emission standards, or operating limits occurred, a statement that no deviations occurred.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. If a fabric filter is used, the date, time, and duration of alarms.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. If a performance evaluation of a CMS was conducted, the results, including any new operating limits and their associated calculations.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. If you met the requirements of §60.488(a)(3) and did not conduct a performance test, include the dates of the last three performance tests, a comparison to the 50 percent emission limit threshold of the emission level achieved in the last three performance tests, and a statement as to whether there have been any process changes.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Documentation of periods when all qualified SSI unit operators were unavailable for more than 8 hours but less than 2 weeks.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Results of annual pollution control device inspections, including description of repairs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. If there were no periods during which your CMSs had malfunctions, a statement that there were no periods during which your CMSs had malfunctions.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. If there were no periods during which your CMSs were out of control, a statement that there were no periods during which your CMSs were out of control.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. If there were no operator training deviations, a statement that there were no such deviations.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Information on monitoring plan revisions, including a copy of any revised monitoring plan.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Deviation report** (deviations from emission limits, emission standards, or operating limits, as specified in §60.4915(e)(1))

<table>
<thead>
<tr>
<th>By August 1 of a calendar year for data collected during the first half of the calendar year; by February 1 of a calendar year for data collected during the second half of the calendar year</th>
</tr>
</thead>
<tbody>
<tr>
<td>If using a CMS: 1. Company name and address</td>
</tr>
<tr>
<td>2. Statement by a responsible official.</td>
</tr>
<tr>
<td>3. The calendar dates and times your unit deviated from the emission limits or operating limits.</td>
</tr>
<tr>
<td>4. The averaged and recorded data for those dates.</td>
</tr>
<tr>
<td>5. Duration and cause of each deviation.</td>
</tr>
<tr>
<td>6. Dates, times, and causes for monitor downtime incidents.</td>
</tr>
<tr>
<td>7. A copy of the operating parameter monitoring data during each deviation and any test report that documents the deviation.</td>
</tr>
</tbody>
</table>

§60.4915(e).
emission levels. For periods of CMS malfunction or when a CMS was out of control, you must include the information specified in §60.4915(e)(3)(viii).

*If not using a CMS:*
1. Company name and address
2. Statement by a responsible official.
3. The total operating time of each affected SSI.
4. The calendar dates and times your unit deviated from the emission limits, emission standard, or operating limits.
5. The averaged and recorded data for those dates.
6. Duration and cause of each deviation.
7. A copy of any performance test report that showed a deviation from the emission limits or standards.
8. A brief description of any malfunction, a description of actions taken during the malfunction to minimize emissions, and corrective action taken.

| Notification of qualified operator deviation (if all qualified operators are not accessible for 2 weeks or more) | Within 10 days of deviation | 1. Statement of cause of deviation
2. Description of actions taken to ensure that a qualified operator will be available
3. The date when a qualified operator will be accessible. | §60.4915(f). |
| --- | --- | --- | --- |
| Notification of status of qualified operator deviation | Every 4 weeks following notification of deviation | 1. Description of actions taken to ensure that a qualified operator is accessible
2. The date when you anticipate that a qualified operator will be accessible.
3. Request for approval to continue operation. | §60.4915(f). |
| Notification of resumed operation following shutdown (due to qualified operator deviation and as specified in §60.4835(b)(2)(i)) | Within 5 days of obtaining a qualified operator and resuming operation | 1. Notification that you have obtained a qualified operator and are resuming operation | §60.4915(f). |
| Notification of a force majeure | As soon as practicable following the date you first knew, or through due diligence should have known that the event may cause or caused a delay in conducting a performance test beyond the regulatory deadline; the notification must occur before the performance test deadline unless the initial force majeure or a subsequent force majeure event delays the notice, and in such cases, the notification must occur as soon as practicable | 1. Description of the force majeure event
2. Rationale for attributing the delay in conducting the performance test beyond the regulatory deadline to the force majeure.
3. Description of the measures taken or to be taken to minimize the delay.
4. Identification of the date by which you propose to conduct the performance test. | §60.4915(g). |
<table>
<thead>
<tr>
<th>Notification of intent to start or stop use of a CMS</th>
<th>1 month before starting or stopping use of a CMS</th>
<th>1. Intent to start or stop use of a CMS §60.4915(h).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notification of intent to conduct a performance test</td>
<td>At least 30 days prior to the performance test</td>
<td>1. Intent to conduct a performance test to comply with this subpart</td>
</tr>
<tr>
<td>Notification of intent to conduct a rescheduled performance test</td>
<td>At least 7 days prior to the date of a rescheduled performance test</td>
<td>1. Intent to conduct a rescheduled performance test to comply with this subpart</td>
</tr>
</tbody>
</table>

\(^a\)This table is only a summary, see the referenced sections of the rule for the complete requirements.

\(^b\)CMS means continuous monitoring system. (red items mentioned in text)
PART 61—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Subpart C—National Emission Standard for Beryllium


§61.30 Applicability.

The provisions of this subpart are applicable to the following stationary sources:

(a) Extraction plants, ceramic plants, foundries, incinerators, and propellant plants which process beryllium ore, beryllium, beryllium oxide, beryllium alloys, or beryllium-containing waste.

(b) Machine shops which process beryllium, beryllium oxides, or any alloy when such alloy contains more than 5 percent beryllium by weight.


§61.31 Definitions.

Terms used in this subpart are defined in the act, in subpart A of this part, or in this section as follows:

(a) Beryllium means the element beryllium. Where weights or concentrations are specified, such weights or concentrations apply to beryllium only, excluding the weight or concentration of any associated elements.

(b) Extraction plant means a facility chemically processing beryllium ore to beryllium metal, alloy, or oxide, or performing any of the intermediate steps in these processes.

(c) Beryllium ore means any naturally occurring material mined or gathered for its beryllium content.

(d) Machine shop means a facility performing cutting, grinding, turning, honing, milling, deburring, lapping, electrochemical machining, etching, or other similar operations.

(e) Ceramic plant means a manufacturing plant producing ceramic items.

(f) Foundry means a facility engaged in the melting or casting of beryllium metal or alloy.

(g) Beryllium-containing waste means material contaminated with beryllium and/or beryllium compounds used or generated during any process or operation performed by a source subject to this subpart.

(h) Incinerator means any furnace used in the process of burning waste for the primary purpose of reducing the volume of the waste by removing combustible matter.
(i) Propellant means a fuel and oxidizer physically or chemically combined which undergoes combustion to provide rocket propulsion.

(j) Beryllium alloy means any metal to which beryllium has been added in order to increase its beryllium content and which contains more than 0.1 percent beryllium by weight.

(k) Propellant plant means any facility engaged in the mixing, casting, or machining of propellant.

§61.32 Emission standard.

(a) Emissions to the atmosphere from stationary sources subject to the provisions of this subpart shall not exceed 10 grams (0.022 lb) of beryllium over a 24-hour period, except as provided in paragraph (b) of this section.

(b) Rather than meet the requirement of paragraph (a) of this section, an owner or operator may request approval from the Administrator to meet an ambient concentration limit on beryllium in the vicinity of the stationary source of 0.01 µg/m³ (4.37 × 10^{-6} gr/ft³), averaged over a 30-day period.

(1) Approval of such requests may be granted by the Administrator provided that:

(i) At least 3 years of data is available which in the judgment of the Administrator demonstrates that the future ambient concentrations of beryllium in the vicinity of the stationary source will not exceed 0.01 µg/m³ (4.37 × 10^{-6} gr/ft³), averaged over a 30-day period. Such 3-year period shall be the 3 years ending 30 days before the effective date of this standard.

(ii) The owner or operator requests such approval in writing within 30 days after the effective date of this standard.

(iii) The owner or operator submits a report to the Administrator within 45 days after the effective date of this standard which report includes the following information:

(a) Description of sampling method including the method and frequency of calibration.

(b) Method of sample analysis.

(c) Averaging technique for determining 30-day average concentrations.

(d) Number, identity, and location (address, coordinates, or distance and heading from plant) of sampling sites.

(e) Ground elevations and height above ground of sampling inlets.

(f) Plant and sampling area plots showing emission points and sampling sites. Topographic features significantly affecting dispersion including plant building heights and locations shall be included.

(g) Information necessary for estimating dispersion including stack height, inside diameter, exit gas temperature, exit velocity or flow rate, and beryllium concentration.

(h) A description of data and procedures (methods or models) used to design the air sampling network (i.e., number and location of sampling sites).

(i) Air sampling data indicating beryllium concentrations in the vicinity of the stationary source for the 3-year period specified in paragraph (b)(1) of this section. This data shall be presented chronologically and include the beryllium concentration and location of each individual sample taken by the network and the corresponding 30-day average beryllium concentrations.

(2) Within 60 days after receiving such report, the Administrator will notify the owner or operator in writing whether approval is granted or denied. Prior to denying approval to comply with the provisions of paragraph (b) of this section,
the Administrator will consult with representatives of the statutory source for which the demonstration report was submitted.

(c) The burning of beryllium and/or beryllium-containing waste, except propellants, is prohibited except in incinerators, emissions from which must comply with the standard.


§61.33 Stack sampling.

(a) Unless a waiver of emission testing is obtained under §61.13, each owner or operator required to comply with §61.32(a) shall test emissions from the source according to Method 104 of appendix B to this part or according to Method 29 of appendix A to part 60. Method 103 of appendix B to this part is approved by the Administrator as an alternative method for sources subject to §61.32(a). The emission test shall be performed:

(1) By May 28, 2014 in the case of an existing source or a new source which has an initial startup date preceding February 27, 2014; or

(2) Within 90 days of startup in the case of a new source which did not have an initial startup date preceding February 27, 2014.

(b) The Administrator shall be notified at least 30 days prior to an emission test so that he may at his option observe the test.

(c) Samples shall be taken over such a period or periods as are necessary to accurately determine the maximum emissions which will occur in any 24-hour period. Where emissions depend upon the relative frequency of operation of different types of processes, operating hours, operating capacities, or other factors, the calculation of maximum 24-hour-period emissions will be based on that combination of factors which is likely to occur during the subject period and which result in the maximum emissions. No changes in the operation shall be made, which would potentially increase emissions above that determined by the most recent source test, until a new emission level has been estimated by calculation and the results reported to the Administrator.

(d) All samples shall be analyzed and beryllium emissions shall be determined within 30 days after the source test. All determinations shall be reported to the Administrator by a registered letter dispatched before the close of the next business day following such determination.

(e) Records of emission test results and other data needed to determine total emissions shall be retained at the source and made available, for inspection by the Administrator, for a minimum of 2 years.


§61.34 Air sampling.

(a) Stationary sources subject to §61.32(b) shall locate air sampling sites in accordance with a plan approved by the Administrator. Such sites shall be located in such a manner as is calculated to detect maximum concentrations of beryllium in the ambient air.

(b) All monitoring sites shall be operated continuously except for a reasonable time allowance for instrument maintenance and calibration, for changing filters, or for replacement of equipment needing major repair.

(c) Filters shall be analyzed and concentrations calculated within 30 days after filters are collected. Records of concentrations at all sampling sites and other data needed to determine such concentrations shall be retained at the source and made available, for inspection by the Administrator, for a minimum of 2 years.

(d) Concentrations measured at all sampling sites shall be reported to the Administrator every 30 days by a registered letter.
(e) The Administrator may at any time require changes in, or expansion of, the sampling network.
Part 70 Operating Permit No: 097-40933-00032

Electronic Code of Federal Regulations
Title 40: Protection of Environment

PART 61—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Subpart E—National Emission Standard for Mercury

Source: 40 FR 48302, Oct. 17, 1975, unless otherwise noted.

§61.50 Applicability.

The provisions of this subpart are applicable to those stationary sources which process mercury ore to recover mercury, use mercury chlor-alkali cells to produce chlorine gas and alkali metal hydroxide, and incinerate or dry wastewater treatment plant sludge.

[40 FR 48302, Oct. 14, 1975]

§61.51 Definitions.

Terms used in this subpart are defined in the act, in subpart A of this part, or in this section as follows:

(a) Mercury means the element mercury, excluding any associated elements, and includes mercury in particulates, vapors, aerosols, and compounds.

(b) Mercury ore means a mineral mined specifically for its mercury content.

(c) Mercury ore processing facility means a facility processing mercury ore to obtain mercury.

(d) Condenser stack gases mean the gaseous effluent evolved from the stack of processes utilizing heat to extract mercury metal from mercury ore.

(e) Mercury chlor-alkali cell means a device which is basically composed of an electrolyzer section and a denuder (decomposer) section and utilizes mercury to produce chlorine gas, hydrogen gas, and alkali metal hydroxide.

(f) Mercury chlor-alkali electrolyzer means an electrolytic device which is part of a mercury chlor-alkali cell and utilizes a flowing mercury cathode to produce chlorine gas and alkali metal amalgam.

(g) Denuder means a horizontal or vertical container which is part of a mercury chlor-alkali cell and in which water and alkali metal amalgam are converted to alkali metal hydroxide, mercury, and hydrogen gas in a short-circuited, electrolytic reaction.

(h) Hydrogen gas stream means a hydrogen stream formed in the chlor-alkali cell denuder.

(i) End box means a container(s) located on one or both ends of a mercury chlor-alkali electrolyzer which serves as a connection between the electrolyzer and denuder for rich and stripped amalgam.

(j) End box ventilation system means a ventilation system which collects mercury emissions from the end-boxes, the mercury pump sumps, and their water collection systems.
(k) Cell room means a structure(s) housing one or more mercury electrolytic chlor-alkali cells.

(l) Sludge means sludge produced by a treatment plant that processes municipal or industrial waste waters.

(m) Sludge dryer means a device used to reduce the moisture content of sludge by heating to temperatures above 65 °C (ca. 150 °F) directly with combustion gases.

[38 FR 8826, Apr. 6, 1973, as amended at 40 FR 48302, Oct. 14, 1975]

§61.52 Emission standard.

(a) Emissions to the atmosphere from mercury ore processing facilities and mercury cell chlor-alkali plants shall not exceed 2.3 kg (5.1 lb) of mercury per 24-hour period.

(b) Emissions to the atmosphere from sludge incineration plants, sludge drying plants, or a combination of these that process wastewater treatment plant sludges shall not exceed 3.2 kg (7.1 lb) of mercury per 24-hour period.


§61.53 Stack sampling.

(a) Mercury ore processing facility. (1) Unless a waiver of emission testing is obtained under §61.13, each owner or operator processing mercury ore shall test emissions from the source according to Method 101 of appendix B to this part. The emission test shall be performed—

   (i) Within 90 days of the effective date in the case of an existing source or a new source which has an initial start-up date preceding the effective date; or

   (ii) Within 90 days of startup in the case of a new source which did not have an initial startup date preceding the effective date.

(2) The Administrator shall be notified at least 30 days prior to an emission test, so that he may at his option observe the test.

(3) Samples shall be taken over such a period or periods as are necessary to accurately determine the maximum emissions which will occur in a 24-hour period. No changes in the operation shall be made, which would potentially increase emissions above that determined by the most recent source test, until the new emission level has been estimated by calculation and the results reported to the Administrator.

(4) All samples shall be analyzed and mercury emissions shall be determined within 30 days after the stack test. Each determination shall be reported to the Administrator by a registered letter dispatched within 15 calendar days following the date such determination is completed.

(5) Records of emission test results and other data needed to determine total emissions shall be retained at the source and made available, for inspection by the Administrator, for a minimum of 2 years.

(b) Mercury chlor-alkali plant—hydrogen and end-box ventilation gas streams. (1) Unless a waiver of emission testing is obtained under §61.13, each owner or operator employing mercury chlor-alkali cell(s) shall test emissions from hydrogen streams according to Method 102 and from end-box ventilation gas streams according to Method 101 of appendix B to this part. The emission test shall be performed—

   (i) Within 90 days of the effective date in the case of an existing source or a new source which has an initial startup date preceding the effective date; or

   (ii) Within 90 days of startup in the case of a new source which did not have an initial startup date preceding the effective date.
(2) The Administrator shall be notified at least 30 days prior to an emission test, so that he may at his option observe the test.

(3) Samples shall be taken over such a period or periods as are necessary to accurately determine the maximum emissions which will occur in a 24-hour period. No changes in the operation shall be made, which would potentially increase emissions above that determined by the most recent source test, until the new emission has been estimated by calculation and the results reported to the Administrator.

(4) All samples shall be analyzed and mercury emissions shall be determined within 30 days after the stack test. Each determination shall be reported to the Administrator by a registered letter dispatched within 15 calendar days following the date such determination is completed.

(5) Records of emission test results and other data needed to determine total emissions shall be retained at the source and made available, for inspection by the Administrator, for a minimum of 2 years.

(c) Mercury chlor-alkali plants—cell room ventilation system. (1) Stationary sources using mercury chlor-alkali cells may test cell room emissions in accordance with paragraph (c)(2) of this section or demonstrate compliance with paragraph (c)(4) of this section and assume ventilation emissions of 1.3 kg/day (2.9 lb/day) of mercury.

(2) Unless a waiver of emission testing is obtained under §61.13, each owner or operator shall pass all cell room air in force gas streams through stacks suitable for testing and shall test emissions from the source according to Method 101 in appendix B to this part. The emission test shall be performed—

(i) Within 90 days of the effective date in the case of an existing source or a new source which has an initial startup date preceding the effective date; or

(ii) Within 90 days of startup in the case of a new source which did not have an initial startup date preceding the effective date.

(3) The Administrator shall be notified at least 30 days prior to an emission test, so that he may at his option observe the test.

(4) An owner or operator may carry out approved design, maintenance, and housekeeping practices. A list of approved practices is provided in appendix A of “Review of National Emission Standards for Mercury,” EPA-450/3-84-014a, December 1984. Copies are available from EPA’s Central Docket Section, Docket Item number A-84-41, III-B-1.

(d) Sludge incineration and drying plants. (1) Unless a waiver of emission testing is obtained under §61.13, each owner or operator of a source subject to the standard in §61.52(b) shall test emissions from that source. Such tests shall be conducted in accordance with the procedures set forth either in paragraph (d) of this section or in §61.54.

(2) Method 101A in appendix B or Method 29 in appendix A to part 60 shall be used to test emissions as follows:

(i) The test shall be performed by May 28, 2014 in the case of an existing source or a new source which has an initial startup date preceding February 27, 2014.

(ii) The test shall be performed within 90 days of startup in the case of a new source which did not have an initial startup date preceding February 27, 2014.

(3) The Administrator shall be notified at least 30 days prior to an emission test, so that he may at his option observe the test.

(4) Samples shall be taken over such a period or periods as are necessary to determine accurately the maximum emissions which will occur in a 24-hour period. No changes shall be made in the operation which would potentially increase emissions above the level determined by the most recent stack test, until the new emission level has been estimated by calculation and the results reported to the Administrator.
(5) All samples shall be analyzed and mercury emissions shall be determined within 30 days after the stack test. Each determination shall be reported to the Administrator by a registered letter dispatched within 15 calendar days following the date such determination is completed.

(6) Records of emission test results and other data needed to determine total emissions shall be retained at the source and shall be made available, for inspection by the Administrator, for a minimum of 2 years.


§61.54  Sludge sampling.

(a) As an alternative means for demonstrating compliance with §61.52(b), an owner or operator may use Method 105 of appendix B and the procedures specified in this section.

(1) A sludge test shall be conducted within 90 days of the effective date of these regulations in the case of an existing source or a new source which has an initial startup date preceding the effective date; or

(2) A sludge test shall be conducted within 90 days of startup in the case of a new source which did not have an initial startup date preceding the effective date.

(b) The Administrator shall be notified at least 30 days prior to a sludge sampling test, so that he may at his option observe the test.

(c) Sludge shall be sampled according to paragraph (c)(1) of this section, sludge charging rate for the plant shall be determined according to paragraph (c)(2) of this section, and the sludge analysis shall be performed according to paragraph (c)(3) of this section.

(1) The sludge shall be sampled according to Method 105—Determination of Mercury in Wastewater Treatment Plant Sewage Sludges. A total of three composite samples shall be obtained within an operating period of 24 hours. When the 24-hour operating period is not continuous, the total sampling period shall not exceed 72 hours after the first grab sample is obtained. Samples shall not be exposed to any condition that may result in mercury contamination or loss.

(2) The maximum 24-hour period sludge incineration or drying rate shall be determined by use of a flow rate measurement device that can measure the mass rate of sludge charged to the incinerator or dryer with an accuracy of ±5 percent over its operating range. Other methods of measuring sludge mass charging rates may be used if they have received prior approval by the Administrator.

(3) The sampling, handling, preparation, and analysis of sludge samples shall be accomplished according to Method 105 in appendix B of this part.

(d) The mercury emissions shall be determined by use of the following equation.

\[ E_{Hg} = \frac{MQ F_{sm(avg)}}{1000} \]

where:

\( E_{Hg} = \) Mercury emissions, g/day.

\( M = \) Mercury concentration of sludge on a dry solids basis, µg/g.

\( Q = \) Sludge changing rate, kg/day.

\( F_{sm} = \) Weight fraction of solids in the collected sludge after mixing.
1000 = Conversion factor, kg µg/g.\textsuperscript{2}

(e) No changes in the operation of a plant shall be made after a sludge test has been conducted which would potentially increase emissions above the level determined by the most recent sludge test, until the new emission level has been estimated by calculation and the results reported to the Administrator.

(f) All sludge samples shall be analyzed for mercury content within 30 days after the sludge sample is collected. Each determination shall be reported to the Administrator by a registered letter dispatched within 15 calendar days following the date such determination is completed.

(g) Records of sludge sampling, charging rate determination and other data needed to determine mercury content of wastewater treatment plant sludges shall be retained at the source and made available, for inspection by the Administrator, for a minimum of 2 years.


§61.55 Monitoring of emissions and operations.

(a) Wastewater treatment plant sludge incineration and drying plants. All the sources for which mercury emissions exceed 1.6 kg (3.5 lb) per 24-hour period, demonstrated either by stack sampling according to §61.53 or sludge sampling according to §61.54, shall monitor mercury emissions at intervals of at least once per year by use of Method 105 of appendix B or the procedures specified in §61.53 (d) (2) and (4). The results of monitoring shall be reported and retained according to §61.53(d) (5) and (6) or §61.54 (f) and (g).

(b) Mercury cell chlor-alkali plants—hydrogen and end-box ventilation gas streams. (1) The owner or operator of each mercury cell chlor-alkali plant shall, within 1 year of the date of publication of these amendments or within 1 year of startup for a plant with initial startup after the date of publication, perform a mercury emission test that demonstrates compliance with the emission limits in §61.52, on the hydrogen stream by Method 102 and on the end-box stream by Method 101 for the purpose of establishing limits for parameters to be monitored.

(2) During tests specified in paragraph (b)(1) of this section, the following control device parameters shall be monitored, except as provided in paragraph (c) of this section, and recorded manually or automatically at least once every 15 minutes.

(i) The exit gas temperature from uncontrolled streams;

(ii) The outlet temperature of the gas stream for the final (i.e., the farthest downstream) cooling system when no control devices other than coolers and demisters are used;

(iii) The outlet temperature of the gas stream from the final cooling system when the cooling system is followed by a molecular sieve or carbon adsorber;

(iv) Outlet concentration of available chlorine, pH, liquid flow rate, and inlet gas temperature of chlorinated brine scrubbers and hypochlorite scrubbers;

(v) The liquid flow rate and exit gas temperature for water scrubbers;

(vi) The inlet gas temperature of carbon adsorption systems; and

(vii) The temperature during the heating phase of the regeneration cycle for carbon adsorbers or molecular sieves.

(3) The recorded parameters in paragraphs (b)(2)(i) through (b)(2)(vi) of this section shall be averaged over the test period (a minimum of 6 hours) to provide an average number. The highest temperature reading that is measured in paragraph (b)(2)(vii) of this section is to be identified as the reference temperature for use in paragraph (b)(6)(ii) of this section.
(4)(i) Immediately following completion of the emission tests specified in paragraph (b)(1) of this section, the owner or operator of a mercury cell chlor-alkali plant shall monitor and record manually or automatically at least once per hour the same parameters specified in paragraphs (b)(2)(i) through (b)(2)(vi) of this section.

(ii) Immediately following completion of the emission tests specified in paragraph (b)(1) of this section, the owner or operator shall monitor and record manually or automatically, during each heating phase of the regeneration cycle, the temperature specified in paragraph (b)(2)(vii) of this section.

(5) Monitoring devices used in accordance with paragraphs (b)(2) and (b)(4) of this section shall be certified by their manufacturer to be accurate to within 10 percent, and shall be operated, maintained, and calibrated according to the manufacturer's instructions. Records of the certifications and calibrations shall be retained at the chlor-alkali plant and made available for inspection by the Administrator as follows: Certification, for as long as the device is used for this purpose; calibration for a minimum of 2 years.

(6)(i) When the hourly value of a parameter monitored in accordance with paragraph (b)(4)(i) of this section exceeds, or in the case of liquid flow rate and available chlorine falls below the value of that same parameter determined in paragraph (b)(2) of this section for 24 consecutive hours, the Administrator is to be notified within the next 10 days.

(ii) When the maximum hourly value of the temperature measured in accordance with paragraph (b)(4)(ii) of this section is below the reference temperature recorded according to paragraph (b)(3) of this section for three consecutive regeneration cycles, the Administrator is to be notified within the next 10 days.

(7) Semiannual reports shall be submitted to the Administrator indicating the time and date on which the hourly value of each parameter monitored according to paragraphs (b)(4)(i) and (b)(4)(ii) of this section fell outside the value of that same parameter determined under paragraph (b)(3) of this section; and corrective action taken, and the time and date of the corrective action. Parameter excursions will be considered unacceptable operation and maintenance of the emission control system. In addition, while compliance with the emission limits is determined primarily by conducting a performance test according to the procedures in §61.53(b), reports of parameter excursions may be used as evidence in judging the duration of a violation that is determined by a performance test.

(8) Semiannual reports required in paragraph (b)(7) of this section shall be submitted to the Administrator on September 15 and March 15 of each year. The first semiannual report is to be submitted following the first full 6 month reporting period. The semiannual report due on September 15 (March 15) shall include all excursions monitored through August 31 (February 28) of the same calendar year.

(c) As an alternative to the monitoring, recordkeeping, and reporting requirements in paragraphs (b)(2) through (8) of this section, an owner or operator may develop and submit for the Administrator's review and approval a plant-specific monitoring plan. To be approved, such a plan must ensure not only compliance with the emission limits of §61.52(a) but also proper operation and maintenance of emissions control systems. Any site-specific monitoring plan submitted must, at a minimum, include the following:

(1) Identification of the critical parameter or parameters for the hydrogen stream and for the end-box ventilation stream that are to be monitored and an explanation of why the critical parameter(s) selected is the best indicator of proper control system performance and of mercury emission rates.

(2) Identification of the maximum or minimum value of each parameter (e.g., degrees temperature, concentration of mercury) that is not to be exceeded. The level(s) is to be directly correlated to the results of a performance test, conducted no more than 180 days prior to submittal of the plan, when the facility was in compliance with the emission limits of §61.52(a).

(3) Designation of the frequency for recording the parameter measurements, with justification if the frequency is less than hourly. A longer recording frequency must be justified on the basis of the amount of time that could elapse during periods of process or control system upsets before the emission limits would be exceeded, and consideration is to be given to the time that would be necessary to repair the failure.

(4) Designation of the immediate actions to be taken in the event of an excursion beyond the value of the parameter established in paragraph (c)(2) of this section.
(5) Provisions for reporting, semiannually, parameter excursions and the corrective actions taken, and provisions for reporting within 10 days any significant excursion.

(6) Identification of the accuracy of the monitoring device(s) or of the readings obtained.

(7) Recordkeeping requirements for certifications and calibrations.

(d) **Mercury cell chlor-alkali plants—cell room ventilation system.** (1) Stationary sources determining cell room emissions in accordance with §61.53(c)(4) shall maintain daily records of all leaks or spills of mercury. The records shall indicate the amount, location, time, and date the leaks or spills occurred, identify the cause of the leak or spill, state the immediate steps taken to minimize mercury emissions and steps taken to prevent future occurrences, and provide the time and date on which corrective steps were taken.

(2) The results of monitoring shall be recorded, retained at the source, and made available for inspection by the Administrator for a minimum of 2 years.


§61.56 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 112(d) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: Sections 61.53(c)(4) and 61.55(d). The authorities not delegated to States listed are in addition to the authorities in the General Provisions, subpart A of 40 CFR part 61, that will not be delegated to States (§§61.04(b), 61.12(d)(1), and 61.13(h)(1)(ii)).

[52 FR 8728, Mar. 19, 1987]
What This Subpart Covers

§63.6580  What is the purpose of subpart ZZZZ?

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

[73 FR 3603, Jan. 18, 2008]

§63.6585  Am I subject to this subpart?

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

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

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

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

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

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.
(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in §63.6675, which includes operating according to the provisions specified in §63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).


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

This subpart applies to each affected source.

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

(1) Existing stationary RICE.

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

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

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

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

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

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

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

(3) Reconstructed stationary RICE. (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after December 19, 2002.
(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

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

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

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

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

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

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(c) **Stationary RICE subject to Regulations under 40 CFR Part 60.** An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;
(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.


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

(a) Affected sources. (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.

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

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

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

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

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

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

(b) Area sources that become major sources. If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.
(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

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

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


Emission and Operating Limitations

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

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

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

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

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

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


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

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

§63.6602 What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations and other requirements in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

[78 FR 6701, Jan. 30, 2013]

§63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either paragraph (b)(1) or (2) of this section, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meet either paragraph (b)(1) or (2) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets paragraphs (b)(2)(i), (ii), and (iii) of this section.

(i) The only connection to the FAHS is through the Alaska Marine Highway System (AMHS), or the stationary RICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in 40 CFR 55.2, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

(1) Change oil every 1,000 hours of operation or annually, whichever comes first. Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or annually, whichever comes first, and replace as necessary.
(4) Inspect all flexible hoses every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in §63.6625(g). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in §63.6625(g) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112, you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart IIII 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 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 IIII 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.


§63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?

(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) Beginning January 1, 2015, if you own or operate a new emergency CI stationary RICE with a site rating of more than 500 brake HP and a displacement of less than 30 liters per cylinder located at a major source of HAP that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.
(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2), or are on offshore vessels that meet §63.6603(c) are exempt from the requirements of this section.

[78 FR 6702, Jan. 30, 2013]

General Compliance Requirements

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

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

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


Testing and Initial Compliance Requirements

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

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

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

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

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

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

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

(2) The test must not be older than 2 years.
(3) The test must be reviewed and accepted by the Administrator.

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

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

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

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

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


§63.6612  By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

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

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

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

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

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

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


§63.6615  When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.
§ 63.6620 What performance tests and other procedures must I use?

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

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.

1. Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

2. New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

3. New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

4. New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(c) [Reserved]

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

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

\[
\frac{C_i - C_o}{C_i} \times 100 = R \quad (Eq. 1)
\]

Where:

- \(C_i\) = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,
- \(C_o\) = concentration of CO, THC, or formaldehyde at the control device outlet, and
- \(R\) = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO\(_2\)). If pollutant concentrations are to be corrected to 15 percent oxygen and CO\(_2\) concentration is measured in lieu of oxygen concentration measurement, a CO\(_2\) correction factor is needed. Calculate the CO\(_2\) correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

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

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

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

\[
X_{CO_2} = \frac{5.9}{F_o} \quad (Eq. \, 3)
\]

Where:

\(X_{CO_2}\) = 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:

\[
C_{adj} = C_d \times \frac{X_{CO_2}}{\%CO_2} \quad (Eq. \, 4)
\]

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.

\(X_{CO_2}\) = CO\(_2\) correction factor, percent.

\(\%CO_2\) = 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;
(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

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

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

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

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

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

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

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

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

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

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


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

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O₂ or CO₂ according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

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

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR
part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

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

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO₂ concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

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

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.
(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

1. An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;
2. An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;
3. An existing emergency or black start stationary RICE located at an area source of HAP emissions;
4. An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;
5. An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;
6. An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.
7. An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;
8. An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;
9. An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and
10. An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet §63.6603(c) do not have to meet the requirements of this paragraph (g).

1. Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or
2. Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine’s time spent at idle during startup and minimize the engine’s startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.
(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

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

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

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

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

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

(e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least three test runs.
(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O2 using one of the O2 measurement methods specified in Table 4 of this subpart. Measurements to determine O2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O2 emissions simultaneously at the inlet and outlet of the control device.


Continuous Compliance Requirements

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

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

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

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

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

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

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

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

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:
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(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). 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
engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.


Notifications, Reports, and Records

§63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following:

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

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

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

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

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

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

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

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).
(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

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

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in §63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in §63.6603(d) and identifying the state or local regulation that the engine is subject to.


§63.6650 What reports must I submit and when?

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

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

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

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

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

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

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

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.
(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

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

(1) Company name and address.

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

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

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

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

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

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

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

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

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

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

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

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

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

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

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS
downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during
that reporting period.

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

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

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

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

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

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

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

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

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

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or
is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in
§63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must submit an annual
report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

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

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time
for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii).
(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §63.13.


§63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

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

(2) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.

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

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

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

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

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

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

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

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.
(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) through (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in §63.6640(f)(2)(ii) or (iii) or §63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

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

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

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

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

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

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

[75 FR 9678, Mar. 3, 2010]

§63.6670 Who implements and enforces this subpart?

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

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

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

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

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

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

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

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

§63.6675 What definitions apply to this subpart?

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

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

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

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

Backup power for renewable energy means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see §63.14).

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 et seq., as amended by Public Law 101-549, 104 Stat. 2399).
Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

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

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

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

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

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

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

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

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

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (e.g. biodiesel) that is suitable for use in compression ignition engines.

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

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

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

(1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.

(2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §63.6640(f).
(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §63.6640(f)(2)(ii) or (iii) and §63.6640(f)(4)(i) or (ii).

*Engine startup* means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

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

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

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

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

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

*Institutional emergency stationary RICE* means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

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

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

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

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

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

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

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

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

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;
(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

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

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

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

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

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

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

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

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

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

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

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

**Propane** means a colorless gas derived from petroleum and natural gas, with the molecular structure C3H8.
Remote stationary RICE means stationary RICE meeting any of the following criteria:

1. Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

2. Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.
   
   (i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

   (ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

   (iii) For purposes of this paragraph (2), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

3. Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

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

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NOx (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

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

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

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

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

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

Subpart means 40 CFR part 63, subpart ZZZZ.

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

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


Table 1a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

<table>
<thead>
<tr>
<th>For each 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.

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 SI 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 ppbvvd 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.¹</td>
</tr>
<tr>
<td>2. existing, new and reconstructed 4SRB stationary RICE &gt;500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or</td>
<td>Comply with any operating limitations approved by the Administrator.</td>
</tr>
<tr>
<td>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 ppbvvd or less at 15 percent O&lt;sub&gt;2&lt;/sub&gt; and not using NSCR.</td>
<td></td>
</tr>
</tbody>
</table>

¹Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6706, Jan. 30, 2013]

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.¹</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>
3. CI stationary RICE

<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>a. Reduce CO emissions by 70 percent or more; or</td>
<td>b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbv or less at 15 percent $O_2$</td>
<td></td>
</tr>
</tbody>
</table>

Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

Table 2b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP

As stated in §§63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; and existing CI stationary RICE >500 HP:

<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. New and reconstructed 2SLB and CI stationary RICE &gt;500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE &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 and using an oxidation catalyst.</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 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.</td>
</tr>
<tr>
<td>2. Existing CI stationary RICE &gt;500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst</td>
<td>a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.</td>
</tr>
<tr>
<td>3. New and reconstructed 2SLB and CI stationary RICE &gt;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 New and reconstructed 2SLB and CI 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 and not using an oxidation catalyst; and</td>
<td>Comply with any operating limitations approved by the Administrator.</td>
</tr>
</tbody>
</table>

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

For each existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst.

1Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6707, Jan. 30, 2013]

Table 2c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>You must meet the following requirement, except during periods of startup . . .</th>
<th>During periods of startup you must . . .</th>
</tr>
</thead>
</table>
| 1. Emergency stationary CI RICE and black start stationary CI RICE<sup>1</sup> | a. Change oil and filter every 500 hours of operation or annually, whichever comes first.<sup>2</sup>  
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.<sup>3</sup> | 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.<sup>3</sup> |
| 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.<sup>2</sup>  
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.<sup>3</sup> |  |
<p>| 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&lt;sub&gt;2&lt;/sub&gt;. |  |</p>
<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>4. Non-Emergency, non-black start CI stationary RICE 300&lt;HP≤500</td>
<td>a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O₂; or b. Reduce CO emissions by 70 percent or more.</td>
<td></td>
</tr>
<tr>
<td>5. Non-Emergency, non-black start stationary CI RICE &gt;500 HP</td>
<td>a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O₂; or b. Reduce CO emissions by 70 percent or more.</td>
<td></td>
</tr>
<tr>
<td>6. Emergency stationary SI RICE and black start stationary SI RICE.¹</td>
<td>a. Change oil and filter every 500 hours of operation or annually, whichever comes first;² b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.³</td>
<td></td>
</tr>
<tr>
<td>7. Non-Emergency, non-black start stationary SI RICE &lt;100 HP that are not 2SLB stationary RICE</td>
<td>a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;² b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.³</td>
<td></td>
</tr>
<tr>
<td>8. Non-Emergency, non-black start 2SLB stationary SI RICE &lt;100 HP</td>
<td>a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;² b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.³</td>
<td></td>
</tr>
<tr>
<td>For each . . .</td>
<td>You must meet the following requirement, except during periods of startup . . .</td>
<td>During periods of startup you must . . .</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500</td>
<td>Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O&lt;sub&gt;2&lt;/sub&gt;.</td>
<td></td>
</tr>
<tr>
<td>10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500</td>
<td>Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O&lt;sub&gt;2&lt;/sub&gt;.</td>
<td></td>
</tr>
<tr>
<td>11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500</td>
<td>Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O&lt;sub&gt;2&lt;/sub&gt;.</td>
<td></td>
</tr>
<tr>
<td>12. Non-emergency, non-black start stationary RICE 100≤HP≤500 which combusts</td>
<td>Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O&lt;sub&gt;2&lt;/sub&gt;.</td>
<td></td>
</tr>
</tbody>
</table>

1If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

2Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2c of this subpart.

3Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[78 FR 6708, Jan. 30, 2013, as amended at 78 FR 14457, Mar. 6, 2013]
Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>You must meet the following requirement, except during periods of startup . . .</th>
<th>During periods of startup you must . . .</th>
</tr>
</thead>
</table>
| 1. Non-Emergency, non-black start CI stationary RICE ≤300 HP | a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;\(^1\)  
b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and  
c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. | Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. |
| 2. Non-Emergency, non-black start CI stationary RICE 300<HP≤500 | a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O\(_2\); or  
b. Reduce CO emissions by 70 percent or more. |  |
| 3. Non-Emergency, non-black start CI stationary RICE >500 HP | a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O\(_2\); or  
b. Reduce CO emissions by 70 percent or more. |  |
| 4. Emergency stationary CI RICE and black start stationary CI RICE.\(^2\) | a. Change oil and filter every 500 hours of operation or annually, whichever comes first;\(^1\)  
b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and  
c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. |  |
<table>
<thead>
<tr>
<th>For each . . .</th>
<th>You must meet the following requirement, except during periods of startup . . .</th>
<th>During periods of startup you must . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE &gt;500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE &gt;500 HP that operate 24 hours or less per calendar year.2</td>
<td>a. Change oil and filter every 500 hours of operation or annually, whichever comes first;1; b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.</td>
<td></td>
</tr>
<tr>
<td>6. Non-emergency, non-black start 2SLB stationary RICE</td>
<td>a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;1</td>
<td></td>
</tr>
<tr>
<td></td>
<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></td>
<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>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.</td>
<td></td>
</tr>
<tr>
<td>8. Non-emergency, non-black start 4SLB remote stationary RICE &gt;500 HP</td>
<td>a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and</td>
<td></td>
</tr>
<tr>
<td>For each . . .</td>
<td>You must meet the following requirement, except during periods of startup . . .</td>
<td>During periods of startup you must . . .</td>
</tr>
<tr>
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</tr>
<tr>
<td>9. Non-emergency, non-black start 4SLB stationary RICE &gt;500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year</td>
<td>Install an oxidation catalyst to reduce HAP emissions from the stationary RICE.</td>
<td></td>
</tr>
<tr>
<td>10. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP</td>
<td>a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.</td>
<td></td>
</tr>
<tr>
<td>11. Non-emergency, non-black start 4SRB remote stationary RICE &gt;500 HP</td>
<td>a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.</td>
<td></td>
</tr>
<tr>
<td>12. Non-emergency, non-black start 4SRB stationary RICE &gt;500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year</td>
<td>Install NSCR to reduce HAP emissions from the stationary RICE.</td>
<td></td>
</tr>
<tr>
<td>13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis</td>
<td>a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and</td>
<td></td>
</tr>
</tbody>
</table>
For each . . . | You must meet the following requirement, except during periods of startup . . . | During periods of startup you must . . .
---|---|---
c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.

1 Sources 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.

2 If 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:

| For each . . . | Complying with the requirement to . . . | You must . . . |
---|---|---
1. New or reconstructed 2SLB stationary RICE >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 >500 HP located at major sources | Reduce CO emissions and not using a CEMS | Conduct subsequent performance tests semiannually.¹ |
2. 4SRB stationary RICE ≥5,000 HP located at major sources | Reduce formaldehyde emissions | Conduct subsequent performance tests semiannually.¹ |
3. Stationary RICE >500 HP located at major sources and new or reconstructed 4SLB stationary RICE 250≤HP≤500 located at major sources | Limit the concentration of formaldehyde in the stationary RICE exhaust | Conduct subsequent performance tests semiannually.¹ |
4. Existing non-emergency, non-black start CI stationary RICE >500 HP that are not limited use stationary RICE | Limit or reduce CO emissions and not using a CEMS | Conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first. |
5. Existing non-emergency, non-black start CI stationary RICE >500 HP that are limited use stationary RICE | Limit or reduce CO emissions and not using a CEMS | Conduct subsequent performance tests every 8,760 hours or 5 years, whichever comes first. |

¹ 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 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>
<thead>
<tr>
<th>For each . . .</th>
<th>Complying with the requirement to . . .</th>
<th>You must . . .</th>
<th>Using . . .</th>
<th>According to the following requirements . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 2SLB, 4SLB, and CI stationary RICE</td>
<td>a. reduce CO emissions</td>
<td>i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and</td>
<td></td>
<td>(a) For CO and O₂ measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts &gt;6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (‘3-point long line’). If the duct is &gt;12 inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at ‘3-point long line’; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>(b) Measurements to determine O₂ must be made at the same time as the measurements for CO concentration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Measure the O₂ at the inlet and outlet of the control device; and</td>
<td>(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)ac (heated probe not necessary)</td>
<td></td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td>(c) The CO concentration must be at 15 percent O₂, dry basis.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii. Measure the CO at the inlet and the outlet of the control device</td>
<td>(1) ASTM D6522-00 (Reapproved 2005)abc (heated probe not necessary) or Method 10 of 40 CFR part 60, appendix A-4</td>
<td></td>
</tr>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You must . . .</td>
<td>Using . . .</td>
<td>According to the following requirements . . .</td>
</tr>
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</tr>
<tr>
<td>2. 4SRB stationary RICE</td>
<td>a. reduce formaldehyde emissions</td>
<td>i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and</td>
<td>(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)(^a) (heated probe not necessary)</td>
<td>(a) For formaldehyde, (O_2), and moisture measurement, ducts (\leq 6) inches in diameter may be sampled at a single point located at the duct centroid and ducts (&gt;6) and (\leq 12) inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (‘3-point long line’). If the duct is (&gt;12) inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at ‘3-point long line’; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Measure (O_2) at the inlet and outlet of the control device; and</td>
<td>(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03(^a)</td>
<td>(a) Measurements to determine (O_2) concentration must be made at the same time as the measurements for formaldehyde or THC concentration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii. Measure moisture content at the inlet and outlet of the control device; and</td>
<td>(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03(^a), provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent (R) must be greater than or equal to 70 and less than or equal to 130</td>
<td>(a) Formaldehyde concentration must be at 15 percent (O_2), dry basis. Results of this test consist of the average of the three 1-hour or longer runs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formaldehyde at the inlet and the outlet of the control device</td>
<td>(1) Method 25A, reported as propane, of 40 CFR part 60, appendix A-7</td>
<td>(a) THC concentration must be at 15 percent (O_2), dry basis. Results of this test consist of the average of the three 1-hour or longer runs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>v. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
For each . . . | Complying with the requirement to . . . | You must . . . | Using . . . | According to the following requirements . . .
---|---|---|---|---
3. Stationary RICE | a. limit the concentration of formaldehyde or CO in the stationary RICE exhaust | i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary RICE; and | (a) For formaldehyde, CO, \(O_2\), and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >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 >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. |
 | | ii. Determine the \(O_2\) concentration of the stationary RICE exhaust at the sampling port location; 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 \(O_2\) concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration. |
 | | iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; 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 CO concentration. |
 | | iv. Measure formaldehyde at the exhaust of the stationary RICE; or | (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 \(O_2\), dry basis. Results of this test consist of the average of the three 1-hour or longer runs. |
 | | v. measure CO at the exhaust of the stationary RICE | (1) Method 10 of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (2005)\(^c\), Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03\(^a\) | (a) CO concentration must be at 15 percent \(O_2\), dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
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>
<tr>
<td>4. Non-emergency stationary CI RICE &gt;500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE &gt;500 HP located at an area source of HAP</td>
<td>a. Limit the concentration of CO, and not using oxidation catalyst</td>
<td>i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.</td>
</tr>
<tr>
<td>5. New or reconstructed non-emergency 2SLB stationary RICE &gt;500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE &gt;500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE &gt;500 HP located at an area source of HAP</td>
<td>a. Reduce CO emissions, and using a CEMS</td>
<td>i. You have installed a CEMS to continuously monitor CO and either O₂ or CO₂ at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.</td>
</tr>
<tr>
<td>6. Non-emergency stationary CI RICE &gt;500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE &gt;500 HP located at an area source of HAP</td>
<td>a. Limit the concentration of CO, and using a CEMS</td>
<td>i. You have installed a CEMS to continuously monitor CO and either O₂ or CO₂ at the outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and iii. The average concentration of CO calculated using §63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.</td>
</tr>
<tr>
<td>7. Non-emergency 4SRB stationary RICE &gt;500 HP located at a major source of HAP</td>
<td>a. Reduce formaldehyde emissions and using NSCR</td>
<td>i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and</td>
</tr>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You have demonstrated initial compliance if . . .</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
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<td>--------------------------------------------------</td>
</tr>
<tr>
<td>ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and</td>
<td></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>iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.</td>
<td></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>
</tr>
<tr>
<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>
<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>
</tr>
<tr>
<td>iii. You have recorded the approved operating parameters (if any) during the initial performance test.</td>
<td></td>
<td>iii. You have recorded the approved operating parameters (if any) during the initial performance test.</td>
</tr>
<tr>
<td>ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and</td>
<td></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>
</tr>
<tr>
<td>iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.</td>
<td></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>
</tr>
<tr>
<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>
<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>
</tr>
<tr>
<td>iii. You have recorded the approved operating parameters (if any) during the initial performance test.</td>
<td></td>
<td>iii. You have recorded the approved operating parameters (if any) during the initial performance test.</td>
</tr>
<tr>
<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>
<td></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>
</tr>
<tr>
<td>----------------</td>
<td>----------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<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>
<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>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and</td>
<td></td>
</tr>
<tr>
<td>2. 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 not 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 approved operating parameter (if any) data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and</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, and existing non-emergency stationary CI RICE &gt;500 HP</td>
<td>a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS</td>
<td>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.</td>
</tr>
<tr>
<td>4. 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. 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.</td>
</tr>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You must demonstrate continuous compliance by . . .</td>
</tr>
<tr>
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</tr>
<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>
</tr>
<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.³</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 limit; and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Collecting the catalyst inlet temperature 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>
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<td></td>
<td>iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and</td>
</tr>
<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 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>
</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>
<td>---------------------------------------------------</td>
</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 ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency stationary SI RICE located at an area source of HAP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE &gt;500 HP located at an area source of HAP that operate 24 hours or less per calendar year, and existing non-emergency 4SLB and 4SRB stationary RICE &gt;500 HP located at an area source of HAP that are remote stationary RICE</td>
<td>a. Work or Management practices</td>
<td>i. Operating and maintaining the stationary RICE according to the manufacturer’s emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.</td>
</tr>
<tr>
<td>10. Existing stationary CI RICE &gt;500 HP that are not limited use stationary RICE</td>
<td>a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and using oxidation catalyst</td>
<td>i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.</td>
</tr>
<tr>
<td>11. Existing stationary CI RICE &gt;500 HP that are not limited use stationary RICE</td>
<td>a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst</td>
<td>i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and</td>
</tr>
<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>
<td>---------------</td>
<td>----------------------------------------</td>
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</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>
</tbody>
</table>
| 12. Existing limited use CI stationary RICE >500 HP | a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst | 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  
ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and 
iii. Reducing these data to 4-hour rolling averages; and 
iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and 
v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. |
<p>|               |                                        | i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and |
|               |                                        | ii. Reducing these data to 4-hour rolling averages; and |
|               |                                        | iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test. |</p>
<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>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 \text{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 \text{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 100sHPs500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE &gt;500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE &gt;500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE &gt;300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE &gt;500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP</td>
<td>Compliance report</td>
<td>a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or</td>
<td>i. Semiannually according to the requirements in §63.6650(b)(1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in §63.6650(b)(6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or</td>
<td>i. Semiannually according to the requirements in §63.6650(b).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4).</td>
<td>i. Semiannually according to the requirements in §63.6650(b).</td>
</tr>
<tr>
<td>2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis</td>
<td>Report</td>
<td>a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and</td>
<td>i. Annually, according to the requirements in §63.6650.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and</td>
<td>i. See item 2.a.i.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c. Any problems or errors suspected with the meters.</td>
<td>i. See item 2.a.i.</td>
</tr>
<tr>
<td>3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE &gt;500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year</td>
<td>Compliance report</td>
<td>a. The results of the annual compliance demonstration, if conducted during the reporting period.</td>
<td>i. Semiannually according to the requirements in §63.6650(b)(1)-(5).</td>
</tr>
</tbody>
</table>
4. Emergency stationary RICE that operate or are contractually obligated to be available for more than 15 hours per year for the purposes specified in §63.6640(f)(2)(ii) or (iii) or that operate for the purposes specified in §63.6640(f)(4)(ii)

<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>Report</td>
<td>a. The information in §63.6650(h)(1)</td>
<td>i. annually according to the requirements in §63.6650(h)(2)-(3).</td>
<td></td>
</tr>
</tbody>
</table>

[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>
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<td>-------------</td>
</tr>
<tr>
<td>§63.6(j)</td>
<td>Presidential compliance exemption</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)(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>
</tr>
<tr>
<td>§63.8(b)(1)</td>
<td>Monitoring</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.8(b)(2)-(3)</td>
<td>Multiple effluents and multiple monitoring systems</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.8(c)(1)</td>
<td>Monitoring system operation and maintenance</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.8(c)(1)(i)</td>
<td>Routine and predictable SSM</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>§63.8(c)(1)(ii)</td>
<td>SSM not in Startup Shutdown Malfunction Plan</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.8(c)(1)(iii)</td>
<td>Compliance with operation and maintenance requirements</td>
<td>No</td>
<td></td>
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<tr>
<td>§63.8(c)(2)-(3)</td>
<td>Monitoring system installation</td>
<td>Yes.</td>
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<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) CMS quality control</td>
<td>Yes</td>
<td></td>
<td>except for §63.8(e)(5)(ii), which applies to COMS.</td>
</tr>
<tr>
<td>§63.8(e) CMS performance evaluation</td>
<td>Yes</td>
<td></td>
<td>except that §63.8(e) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.8(f)(1)-(5) Alternative monitoring method</td>
<td>Yes</td>
<td></td>
<td>except that §63.8(f)(4) only applies as specified in §63.6645.</td>
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<tr>
<td>§63.8(f)(6) Alternative to relative accuracy test</td>
<td>Yes</td>
<td></td>
<td>except that §63.8(f)(6) only applies as specified in §63.6645.</td>
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<tr>
<td>§63.8(g) Data reduction</td>
<td>Yes</td>
<td></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) Applicability and State delegation of notification requirements</td>
<td>Yes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§63.9(b)(1)-(5) Initial notifications</td>
<td>Yes</td>
<td></td>
<td>except that §63.9(b)(3) is reserved.</td>
</tr>
<tr>
<td>§63.9(c) Request for compliance extension</td>
<td>Yes</td>
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<td>except that §63.9(c) only applies as specified in §63.6645.</td>
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<tr>
<td>§63.9(d) Notification of special compliance requirements for new sources</td>
<td>Yes</td>
<td></td>
<td>except that §63.9(d) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.9(e) Notification of performance test</td>
<td>Yes</td>
<td></td>
<td>except that §63.9(e) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.9(f) Notification of visible emission (VE)/opacity test</td>
<td>No</td>
<td></td>
<td>Subpart ZZZZ does not contain opacity or VE standards.</td>
</tr>
<tr>
<td>§63.9(g)(1) Notification of performance evaluation</td>
<td>Yes</td>
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<td>except that §63.9(g) only applies as specified in §63.6645.</td>
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<tr>
<td>§63.9(g)(2) Notification of use of COMS data</td>
<td>No</td>
<td></td>
<td>Subpart ZZZZ does not contain opacity or VE standards.</td>
</tr>
<tr>
<td>§63.9(g)(3) Notification that criterion for alternative to RATA is exceeded</td>
<td>Yes</td>
<td></td>
<td>if alternative is in use.</td>
</tr>
<tr>
<td>§63.9(h)(1)-(6) Notification of compliance status</td>
<td>Yes</td>
<td></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) Adjustment of submittal deadlines</td>
<td>Yes</td>
<td></td>
<td>except that §63.9(h)(4) only applies as specified in §63.6645.</td>
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<tr>
<td>§63.9(j) Change in previous information</td>
<td>Yes</td>
<td></td>
<td></td>
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<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>
<td></td>
</tr>
<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>
</tr>
<tr>
<td>§63.10(b)(2)(xii)</td>
<td>Record when under waiver</td>
<td>Yes.</td>
<td>For CO standard if using RATA alternative.</td>
</tr>
<tr>
<td>§63.10(b)(2)(xiii)</td>
<td>Records when using alternative to RATA</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.10(b)(2)(xiv)</td>
<td>Records of supporting documentation</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.10(b)(3)</td>
<td>Records of applicability determination</td>
<td>Yes.</td>
<td></td>
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<tr>
<td>§63.10(c)</td>
<td>Additional records for sources using CEMS</td>
<td>Yes.</td>
<td>Except that §63.10(c)(2)-(4) and (9) are reserved.</td>
</tr>
<tr>
<td>§63.10(d)(1)</td>
<td>General reporting requirements</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.10(d)(2)</td>
<td>Report of performance test results</td>
<td>Yes.</td>
<td></td>
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<tr>
<td>§63.10(d)(3)</td>
<td>Reporting opacity or VE observations</td>
<td>No.</td>
<td>Subpart ZZZZ does not contain opacity or VE standards.</td>
</tr>
<tr>
<td>§63.10(d)(4)</td>
<td>Progress reports</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.10(d)(5)</td>
<td>Startup, shutdown, and malfunction reports</td>
<td>No.</td>
<td></td>
</tr>
<tr>
<td>§63.10(e)(1) and (2)(i)</td>
<td>Additional CMS Reports</td>
<td>Yes.</td>
<td></td>
</tr>
<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>
<td></td>
</tr>
<tr>
<td>§63.11</td>
<td>Flares</td>
<td>No.</td>
<td></td>
</tr>
<tr>
<td>§63.12</td>
<td>State authority and delegations</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.13</td>
<td>Addresses</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.14</td>
<td>Incorporation by reference</td>
<td>Yes.</td>
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</tr>
<tr>
<td>§63.15</td>
<td>Availability of information</td>
<td>Yes.</td>
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</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*


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

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[78 FR 6721, Jan. 30, 2013]
What This Subpart Covers

§ 63.11110 What is the purpose of this subpart?

This subpart establishes national emission limitations and management practices for hazardous air pollutants (HAP) emitted from the loading of gasoline storage tanks at gasoline dispensing facilities (GDF). This subpart also establishes requirements to demonstrate compliance with the emission limitations and management practices.

§ 63.11111 Am I subject to the requirements in this subpart?

(a) The affected source to which this subpart applies is each GDF that is located at an area source. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank.

(b) If your GDF has a monthly throughput of less than 10,000 gallons of gasoline, you must comply with the requirements in § 63.11116.

(c) If your GDF has a monthly throughput of 10,000 gallons of gasoline or more, you must comply with the requirements in § 63.11117.

(d) If your GDF has a monthly throughput of 100,000 gallons of gasoline or more, you must comply with the requirements in § 63.11118.

(e) An affected source shall, upon request by the Administrator, demonstrate that their monthly throughput is less than the 10,000-gallon or the 100,000-gallon threshold level, as applicable. For new or reconstructed affected sources, as specified in § 63.11112(b) and (c), recordkeeping to document monthly throughput must begin upon startup of the affected source. For existing sources, as specified in § 63.11112(d), recordkeeping to document monthly throughput must begin on January 10, 2008. For existing sources that are subject to this subpart only because they load gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, recordkeeping to document monthly throughput must begin on January 24, 2011. Records required under this paragraph shall be kept for a period of 5 years.

(f) If you are an owner or operator of affected sources, as defined in paragraph (a) of this section, you are not required to obtain a permit under 40 CFR part 70 or 40 CFR part 71 as a result of being subject to this subpart. However, you must still apply for and obtain a permit under 40 CFR part 70 or 40 CFR part 71 if you meet one or more of the applicability criteria found in 40 CFR 70.3(a) and (b) or 40 CFR 71.3(a) and (b).
(g) The loading of aviation gasoline into storage tanks at airports, and the subsequent transfer of aviation gasoline within the airport, is not subject to this subpart.

(h) Monthly throughput is the total volume of gasoline loaded into, or dispensed from, all the gasoline storage tanks located at a single affected GDF. If an area source has two or more GDF at separate locations within the area source, each GDF is treated as a separate affected source.

(i) If your affected source’s throughput ever exceeds an applicable throughput threshold, the affected source will remain subject to the requirements for sources above the threshold, even if the affected source throughput later falls below the applicable throughput threshold.

(j) The dispensing of gasoline from a fixed gasoline storage tank at a GDF into a portable gasoline tank for the on-site delivery and subsequent dispensing of the gasoline into the fuel tank of a motor vehicle or other gasoline-fueled engine or equipment used within the area source is only subject to § 63.11116 of this subpart.

(k) For any affected source subject to the provisions of this subpart and another Federal rule, you may elect to comply only with the more stringent provisions of the applicable subparts. You must consider all provisions of the rules, including monitoring, recordkeeping, and reporting. You must identify the affected source and provisions with which you will comply in your Notification of Compliance Status required under § 63.11124. You also must demonstrate in your Notification of Compliance Status that each provision with which you will comply is at least as stringent as the otherwise applicable requirements in this subpart. You are responsible for making accurate determinations concerning the more stringent provisions, and noncompliance with this rule is not excused if it is later determined that your determination was in error, and, as a result, you are violating this subpart. Compliance with this rule is your responsibility and the Notification of Compliance Status does not alter or affect that responsibility.


§ 63.11112 What parts of my affected source does this subpart cover?

(a) The emission sources to which this subpart applies are gasoline storage tanks and associated equipment components in vapor or liquid gasoline service at new, reconstructed, or existing GDF that meet the criteria specified in § 63.11111. Pressure/Vacuum vents on gasoline storage tanks and the equipment necessary to unload product from cargo tanks into the storage tanks at GDF are covered emission sources. The equipment used for the refueling of motor vehicles is not covered by this subpart.

(b) An affected source is a new affected source if you commenced construction on the affected source after November 9, 2006, and you meet the applicability criteria in § 63.11111 at the time you commenced operation.

(c) An affected source is reconstructed if you meet the criteria for reconstruction as defined in § 63.2.

(d) An affected source is an existing affected source if it is not new or reconstructed.

§ 63.11113 When do I have to comply with this subpart?

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to paragraphs (a)(1) and (2) of this section, except as specified in paragraph (d) of this section.

(1) If you start up your affected source before January 10, 2008, you must comply with the standards in this subpart no later than January 10, 2008.

(2) If you start up your affected source after January 10, 2008, you must comply with the standards in this subpart upon startup of your affected source.

(b) If you have an existing affected source, you must comply with the standards in this subpart no later than January 10, 2011.
(c) If you have an existing affected source that becomes subject to the control requirements in this subpart because of an increase in the monthly throughput, as specified in § 63.11111(c) or § 63.11111(d), you must comply with the standards in this subpart no later than 3 years after the affected source becomes subject to the control requirements in this subpart.

(d) If you have a new or reconstructed affected source and you are complying with Table 1 to this subpart, you must comply according to paragraphs (d)(1) and (2) of this section.

(1) If you start up your affected source from November 9, 2006 to September 23, 2008, you must comply no later than September 23, 2008.

(2) If you start up your affected source after September 23, 2008, you must comply upon startup of your affected source.

(e) The initial compliance demonstration test required under § 63.11120(a)(1) and (2) must be conducted as specified in paragraphs (e)(1) and (2) of this section.

(1) If you have a new or reconstructed affected source, you must conduct the initial compliance test upon installation of the complete vapor balance system.

(2) If you have an existing affected source, you must conduct the initial compliance test as specified in paragraphs (e)(2)(i) or (e)(2)(ii) of this section.

(i) For vapor balance systems installed on or before December 15, 2009, you must test no later than 180 days after the applicable compliance date specified in paragraphs (b) or (c) of this section.

(ii) For vapor balance systems installed after December 15, 2009, you must test upon installation of the complete vapor balance system.

(f) If your GDF is subject to the control requirements in this subpart only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, you must comply with the standards in this subpart as specified in paragraphs (f)(1) or (f)(2) of this section.

(1) If your GDF is an existing facility, you must comply by January 24, 2014.

(2) If your GDF is a new or reconstructed facility, you must comply by the dates specified in paragraphs (f)(2)(i) and (ii) of this section.

(i) If you start up your GDF after December 15, 2009, but before January 24, 2011, you must comply no later than January 24, 2011.

(ii) If you start up your GDF after January 24, 2011, you must comply upon startup of your GDF.


Emission Limitations and Management Practices

§ 63.11115 What are my general duties to minimize emissions?

Each owner or operator of an affected source under this subpart must comply with the requirements of paragraphs (a) and (b) of this section.

(a) You must, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review
of operation and maintenance procedures, review of operation and maintenance records, and inspection of the
source.

(b) You must keep applicable records and submit reports as specified in § 63.11125(d) and § 63.11126(b).

[76 FR 4182, Jan. 24, 2011]

§ 63.11116 Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline.

(a) You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for
extended periods of time. Measures to be taken include, but are not limited to, the following:

(1) Minimize gasoline spills;

(2) Clean up spills as expeditiously as practicable;

(3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;

(4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and
recycling devices, such as oil/water separators.

(b) You are not required to submit notifications or reports as specified in § 63.11125, § 63.11126, or subpart A of this
part, but you must have records available within 24 hours of a request by the Administrator to document your
gasoline throughput.

(c) You must comply with the requirements of this subpart by the applicable dates specified in § 63.11113.

(d) Portable gasoline containers that meet the requirements of 40 CFR part 59, subpart F, are considered acceptable
for compliance with paragraph (a)(3) of this section.


§ 63.11117 Requirements for facilities with monthly throughput of 10,000 gallons of gasoline or more.

(a) You must comply with the requirements in section § 63.11116(a).

(b) Except as specified in paragraph (c) of this section, you must only load gasoline into storage tanks at your facility
by utilizing submerged filling, as defined in § 63.11132, and as specified in paragraphs (b)(1), (b)(2), or (b)(3) of this
section. The applicable distances in paragraphs (b)(1) and (2) shall be measured from the point in the opening of the
submerged fill pipe that is the greatest distance from the bottom of the storage tank.

(1) Submerged fill pipes installed on or before November 9, 2006, must be no more than 12 inches from the bottom of
the tank.

(2) Submerged fill pipes installed after November 9, 2006, must be no more than 6 inches from the bottom of the
tank.

(3) Submerged fill pipes not meeting the specifications of paragraphs (b)(1) or (b)(2) of this section are allowed if the
owner or operator can demonstrate that the liquid level in the tank is always above the entire opening of the fill pipe.
Documentation providing such demonstration must be made available for inspection by the Administrator’s delegated
representative during the course of a site visit.

(c) Gasoline storage tanks with a capacity of less than 250 gallons are not required to comply with the submerged fill
requirements in paragraph (b) of this section, but must comply only with all of the requirements in § 63.11116.
(d) You must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(e) You must submit the applicable notifications as required under § 63.11124(a).

(f) You must comply with the requirements of this subpart by the applicable dates contained in § 63.11113.


§ 63.11118 Requirements for facilities with monthly throughput of 100,000 gallons of gasoline or more.

(a) You must comply with the requirements in §§ 63.11116(a) and 63.11117(b).

(b) Except as provided in paragraph (c) of this section, you must meet the requirements in either paragraph (b)(1) or paragraph (b)(2) of this section.

(1) Each management practice in Table 1 to this subpart that applies to your GDF.

(2) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(2)(i) and (ii) of this section, you will be deemed in compliance with this subsection.

(i) You operate a vapor balance system at your GDF that meets the requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.

(c) The emission sources listed in paragraphs (c)(1) through (3) of this section are not required to comply with the control requirements in paragraph (b) of this section, but must comply with the requirements in § 63.11117.

(1) Gasoline storage tanks with a capacity of less than 250 gallons that are constructed after January 10, 2008.

(2) Gasoline storage tanks with a capacity of less than 2,000 gallons that were constructed before January 10, 2008.

(3) Gasoline storage tanks equipped with floating roofs, or the equivalent.

(d) Cargo tanks unloading at GDF must comply with the management practices in Table 2 to this subpart.

(e) You must comply with the applicable testing requirements contained in § 63.11120.

(f) You must submit the applicable notifications as required under § 63.11124.

(g) You must keep records and submit reports as specified in §§ 63.11125 and 63.11126.

(h) You must comply with the requirements of this subpart by the applicable dates contained in § 63.11113.

Testing and Monitoring Requirements

§ 63.11120 What testing and monitoring requirements must I meet?

(a) Each owner or operator, at the time of installation, as specified in § 63.11113(e), of a vapor balance system required under § 63.11118(b)(1), and every 3 years thereafter, must comply with the requirements in paragraphs (a)(1) and (2) of this section.

(1) You must demonstrate compliance with the leak rate and cracking pressure requirements, specified in item 1(g) of Table 1 to this subpart, for pressure-vacuum vent valves installed on your gasoline storage tanks using the test methods identified in paragraph (a)(1)(i) or paragraph (a)(1)(ii) of this section.

(i) California Air Resources Board Vapor Recovery Test Procedure TP-201.1E,—Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, adopted October 8, 2003 (incorporated by reference, see § 63.14).

(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in § 63.7(f).

(2) You must demonstrate compliance with the static pressure performance requirement specified in item 1(h) of Table 1 to this subpart for your vapor balance system by conducting a static pressure test on your gasoline storage tanks using the test methods identified in paragraphs (a)(2)(i), (a)(2)(ii), or (a)(2)(iii) of this section.


(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in § 63.7(f).


(b) Each owner or operator choosing, under the provisions of § 63.6(g), to use a vapor balance system other than that described in Table 1 to this subpart must demonstrate to the Administrator or delegated authority under paragraph § 63.11131(a) of this subpart, the equivalency of their vapor balance system to that described in Table 1 to this subpart using the procedures specified in paragraphs (b)(1) through (3) of this section.

(1) You must demonstrate initial compliance by conducting an initial performance test on the vapor balance system to demonstrate that the vapor balance system achieves 95 percent reduction using the California Air Resources Board Vapor Recovery Test Procedure TP-201.1,—Volumetric Efficiency for Phase I Vapor Recovery Systems, adopted April 12, 1996, and amended February 1, 2001, and October 8, 2003, (incorporated by reference, see § 63.14).

(2) You must, during the initial performance test required under paragraph (b)(1) of this section, determine and document alternative acceptable values for the leak rate and cracking pressure requirements specified in item 1(g) of Table 1 to this subpart and for the static pressure performance requirement in item 1(h) of Table 1 to this subpart.

(3) You must comply with the testing requirements specified in paragraph (a) of this section.

(c) Conduct of performance tests. Performance tests conducted for this subpart shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (i.e., performance based on normal operating conditions) of the affected source. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(d) Owners and operators of gasoline cargo tanks subject to the provisions of Table 2 to this subpart must conduct annual certification testing according to the vapor tightness testing requirements found in § 63.11092(f).
Notifications, Records, and Reports

§ 63.11124 What notifications must I submit and when?

(a) Each owner or operator subject to the control requirements in § 63.11117 must comply with paragraphs (a)(1) through (3) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in § 63.11117, unless you meet the requirements in paragraph (a)(3) of this section. If your affected source is subject to the control requirements in § 63.11117 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, you must submit the Initial Notification by May 24, 2011. The Initial Notification must contain the information specified in paragraphs (a)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in § 63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of § 63.11117 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in § 63.13, within 60 days of the applicable compliance date specified in § 63.11113, unless you meet the requirements in paragraph (a)(3) of this section. The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facilities' monthly throughput is calculated based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (a)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (a)(1) of this section.

(3) If, prior to January 10, 2008, you are operating in compliance with an enforceable State, local, or tribal rule or permit that requires submerged fill as specified in § 63.11117(b), you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (a)(1) or paragraph (a)(2) of this section.

(b) Each owner or operator subject to the control requirements in § 63.11118 must comply with paragraphs (b)(1) through (5) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in § 63.11118. If your affected source is subject to the control requirements in § 63.11118 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, you must submit the Initial Notification by May 24, 2011. The Initial Notification must contain the information specified in paragraphs (b)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in § 63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of § 63.11118 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in § 63.13, in accordance with the schedule specified in § 63.9(h). The Notification of
Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facility's throughput is determined based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (b)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (b)(1) of this section.

(3) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(3)(i) and (ii) of this section, you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (b)(1) or paragraph (b)(2) of this subsection.

(i) You operate a vapor balance system at your gasoline dispensing facility that meets the requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(4) You must submit a Notification of Performance Test, as specified in § 63.9(e), prior to initiating testing required by § 63.11120(a) and (b).

(5) You must submit additional notifications specified in § 63.9, as applicable.


§ 63.11125 What are my recordkeeping requirements?

(a) Each owner or operator subject to the management practices in § 63.11118 must keep records of all tests performed under § 63.11120(a) and (b).

(b) Records required under paragraph (a) of this section shall be kept for a period of 5 years and shall be made available for inspection by the Administrator's delegated representatives during the course of a site visit.

(c) Each owner or operator of a gasoline cargo tank subject to the management practices in Table 2 to this subpart must keep records documenting vapor tightness testing for a period of 5 years. Documentation must include each of the items specified in § 63.11094(b)(2)(i) through (viii). Records of vapor tightness testing must be retained as specified in either paragraph (c)(1) or paragraph (c)(2) of this section.

(1) The owner or operator must keep all vapor tightness testing records with the cargo tank.

(2) As an alternative to keeping all records with the cargo tank, the owner or operator may comply with the requirements of paragraphs (c)(2)(i) and (ii) of this section.

(i) The owner or operator may keep records of only the most recent vapor tightness test with the cargo tank, and keep records for the previous 4 years at their office or another central location.

(ii) Vapor tightness testing records that are kept at a location other than with the cargo tank must be instantly available (e.g., via e-mail or facsimile) to the Administrator's delegated representative during the course of a site visit or within a mutually agreeable time frame. Such records must be an exact duplicate image of the original paper copy record with certifying signatures.
(d) Each owner or operator of an affected source under this subpart shall keep records as specified in paragraphs (d)(1) and (2) of this section.

(1) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.

(2) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.11115(a), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.


§ 63.11126 What are my reporting requirements?

(a) Each owner or operator subject to the management practices in §63.11118 shall report to the Administrator the results of all volumetric efficiency tests required under §63.11120(b). Reports submitted under this paragraph must be submitted within 180 days of the completion of the performance testing.

(b) Each owner or operator of an affected source under this subpart shall report, by March 15 of each year, the number, duration, and a brief description of each type of malfunction which occurred during the previous calendar year and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.11115(a), including actions taken to correct a malfunction. No report is necessary for a calendar year in which no malfunctions occurred.

[76 FR 4183, Jan. 24, 2011]

Other Requirements and Information

§ 63.11130 What parts of the General Provisions apply to me?

Table 3 to this subpart shows which parts of the General Provisions apply to you.

§ 63.11131 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as the applicable State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or tribal agency.

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

(c) The authorities that cannot be delegated to State, local, or tribal agencies are as specified in paragraphs (c)(1) through (3) of this section.

(1) Approval of alternatives to the requirements in §§63.11116 through 63.11118 and 63.11120.

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

(3) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.
§ 63.11132 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act (CAA), or in subparts A and BBBB of this part. For purposes of this subpart, definitions in this section supersede definitions in other parts or subparts.

_Dual-point vapor balance system_ means a type of vapor balance system in which the storage tank is equipped with an entry port for a gasoline fill pipe and a separate exit port for a vapor connection.

_Gasoline_ means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater, which is used as a fuel for internal combustion engines.

_Gasoline cargo tank_ means a delivery tank truck or railcar which is loading or unloading gasoline, or which has loaded or unloaded gasoline on the immediately previous load.

_Gasoline dispensing facility (GDF)_ means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine used solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline-fueled engines and equipment.

_Monthly throughput_ means the total volume of gasoline that is loaded into, or dispensed from, all gasoline storage tanks at each GDF during a month. Monthly throughput is calculated by summing the volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the current day, plus the total volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the previous 364 days, and then dividing that sum by 12.

_Motor vehicle_ means any self-propelled vehicle designed for transporting persons or property on a street or highway.

_Nonroad engine_ means an internal combustion engine (including the fuel system) that is not used in a motor vehicle or a vehicle used solely for competition, or that is not subject to standards promulgated under section 7411 of this title or section 7521 of this title.

_Nonroad vehicle_ means a vehicle that is powered by a nonroad engine, and that is not a motor vehicle or a vehicle used solely for competition.

_Submerged filling_ means, for the purposes of this subpart, the filling of a gasoline storage tank through a submerged fill pipe whose discharge is no more than the applicable distance specified in § 63.11117(b) from the bottom of the tank. Bottom filling of gasoline storage tanks is included in this definition.

_Vapor balance system_ means a combination of pipes and hoses that create a closed system between the vapor spaces of an unloading gasoline cargo tank and a receiving storage tank such that vapors displaced from the storage tank are transferred to the gasoline cargo tank being unloaded.

_Vapor-tight_ means equipment that allows no loss of vapors. Compliance with vapor-tight requirements can be determined by checking to ensure that the concentration at a potential leak source is not equal to or greater than 100 percent of the Lower Explosive Limit when measured with a combustible gas detector, calibrated with propane, at a distance of 1 inch from the source.

_Vapor-tight gasoline cargo tank_ means a gasoline cargo tank which has demonstrated within the 12 preceding months that it meets the annual certification test requirements in § 63.11092(f) of this part.

Table 1 to Subpart CCCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More

<table>
<thead>
<tr>
<th>If you own or operate</th>
<th>Then you must</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A new, reconstructed, or existing GDF subject to § 63.11118</td>
<td>Install and operate a vapor balance system on your gasoline storage tanks that meets the design criteria in paragraphs (a) through (h).</td>
</tr>
<tr>
<td></td>
<td>(a) All vapor connections and lines on the storage tank shall be equipped with closures that seal upon disconnect.</td>
</tr>
<tr>
<td></td>
<td>(b) The vapor line from the gasoline storage tank to the gasoline cargo tank shall be vapor-tight, as defined in § 63.11132.</td>
</tr>
<tr>
<td></td>
<td>(c) The vapor balance system shall be designed such that the pressure in the tank truck does not exceed 18 inches water pressure or 5.9 inches water vacuum during product transfer.</td>
</tr>
<tr>
<td></td>
<td>(d) The vapor recovery and product adaptors, and the method of connection with the delivery elbow, shall be designed so as to prevent the over-tightening or loosening of fittings during normal delivery operations.</td>
</tr>
<tr>
<td></td>
<td>(e) If a gauge well separate from the fill tube is used, it shall be provided with a submerged drop tube that extends the same distance from the bottom of the storage tank as specified in § 63.11117(b).</td>
</tr>
<tr>
<td></td>
<td>(f) Liquid fill connections for all systems shall be equipped with vapor-tight caps.</td>
</tr>
<tr>
<td></td>
<td>(g) Pressure/vacuum (PV) vent valves shall be installed on the storage tank vent pipes. The pressure specifications for PV vent valves shall be: a positive pressure setting of 2.5 to 6.0 inches of water and a negative pressure setting of 6.0 to 10.0 inches of water. The total leak rate of all PV vent valves at an affected facility, including connections, shall not exceed 0.17 cubic foot per hour at a pressure of 2.0 inches of water and 0.63 cubic foot per hour at a vacuum of 4 inches of water.</td>
</tr>
<tr>
<td></td>
<td>(h) The vapor balance system shall be capable of meeting the static pressure performance requirement of the following equation:</td>
</tr>
<tr>
<td></td>
<td>[ Pf = 2e^{-500.887/v} ]</td>
</tr>
<tr>
<td></td>
<td>Where:</td>
</tr>
<tr>
<td></td>
<td>Pf = Minimum allowable final pressure, inches of water.</td>
</tr>
<tr>
<td></td>
<td>v = Total ullage affected by the test, gallons.</td>
</tr>
<tr>
<td></td>
<td>e = Dimensionless constant equal to approximately 2.718.</td>
</tr>
<tr>
<td></td>
<td>2 = The initial pressure, inches water.</td>
</tr>
<tr>
<td>2. A new or reconstructed GDF, or any storage tank(s) constructed after November 9, 2006, at an existing affected facility subject to § 63.11118</td>
<td>Equip your gasoline storage tanks with a dual-point vapor balance system, as defined in § 63.11132, and comply with the requirements of item 1 in this Table.</td>
</tr>
</tbody>
</table>

1 The management practices specified in this Table are not applicable if you are complying with the requirements in § 63.11118(b)(2), except that if you are complying with the requirements in § 63.11118(b)(2)(i)(B), you must operate using management practices at least as stringent as those listed in this Table.

Table 2 to Subpart CCCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Cargo Tanks Unloading at Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More

<table>
<thead>
<tr>
<th>If you own or operate</th>
<th>Then you must</th>
</tr>
</thead>
<tbody>
<tr>
<td>A gasoline cargo tank</td>
<td>Not unload gasoline into a storage tank at a GDF subject to the control requirements in this subpart unless the following conditions are met:</td>
</tr>
<tr>
<td></td>
<td>(i) All hoses in the vapor balance system are properly connected;</td>
</tr>
<tr>
<td></td>
<td>(ii) The adapters or couplers that attach to the vapor line on the storage tank have closures that seal upon disconnect,</td>
</tr>
<tr>
<td></td>
<td>(iii) All vapor return hoses, couplers, and adapters used in the gasoline delivery are vapor-tight,</td>
</tr>
<tr>
<td></td>
<td>(iv) All tank truck vapor return equipment is compatible in size and forms a vapor-tight connection with the vapor balance equipment on the GDF storage tank, and</td>
</tr>
<tr>
<td></td>
<td>(v) All hatches on the tank truck are closed and securely fastened.</td>
</tr>
<tr>
<td></td>
<td>(vi) The filling of storage tanks at GDF shall be limited to unloading from vapor-tight gasoline cargo tanks. Documentation that the cargo tank has met the specifications of EPA Method 27 shall be carried with the cargo tank, as specified in §63.11125(c).</td>
</tr>
</tbody>
</table>


Table 3 to Subpart CCCCCC of Part 63—Applicability of General Provisions

<table>
<thead>
<tr>
<th>Citation</th>
<th>Subject</th>
<th>Brief description</th>
<th>Applies to subpart CCCCCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>§63.1</td>
<td>Applicability</td>
<td>Initial applicability determination; applicability after standard established; permit requirements; extensions, notifications</td>
<td>Yes, specific requirements given in §63.11111.</td>
</tr>
<tr>
<td>§63.1(c)(2)</td>
<td>Title V Permit</td>
<td>Requirements for obtaining a title V permit from the applicable permitting authority</td>
<td>Yes, §63.11111(f) of subpart CCCCCC exempts identified area sources from the obligation to obtain title V operating permits.</td>
</tr>
<tr>
<td>§63.2</td>
<td>Definitions</td>
<td>Definitions for part 63 standards</td>
<td>Yes, additional definitions in §63.11132.</td>
</tr>
<tr>
<td>§63.3</td>
<td>Units and Abbreviations</td>
<td>Units and abbreviations for part 63 standards</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.4</td>
<td>Prohibited Activities and Circumvention</td>
<td>Prohibited activities; Circumvention, severability</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.5</td>
<td>Construction/Reconstruction</td>
<td>Applicability; applications; approvals</td>
<td>Yes, except that these notifications are not required for facilities subject to §63.11116</td>
</tr>
<tr>
<td>§63.6(a)</td>
<td>Compliance with Standards/Operation &amp; Maintenance—Applicability</td>
<td>General Provisions apply unless compliance extension; General Provisions apply to area sources that become major</td>
<td>Yes.</td>
</tr>
<tr>
<td>Citation</td>
<td>Subject</td>
<td>Brief description</td>
<td>Applies to subpart CCCCCC</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>§ 63.6(b)(1)-(4)</td>
<td>Compliance Dates for New and Reconstructed Sources</td>
<td>Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for CAA section 112(f)</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.6(b)(5)</td>
<td>Notification</td>
<td>Must notify if commenced construction or reconstruction after proposal</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.6(b)(6)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§ 63.6(b)(7)</td>
<td>Compliance Dates for New and Reconstructed Area Sources That Become Major</td>
<td>Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(c)(1)-(2)</td>
<td>Compliance Dates for Existing Sources</td>
<td>Comply according to date in this subpart, which must be no later than 3 years after effective date; for CAA section 112(f) standards, comply within 90 days of effective date unless compliance extension</td>
<td>No. § 63.11113 specifies the compliance dates.</td>
</tr>
<tr>
<td>§ 63.6(c)(3)-(4)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§ 63.6(c)(5)</td>
<td>Compliance Dates for Existing Area Sources That Become Major</td>
<td>Area sources That become major must comply with major source standards by date indicated in this subpart or by equivalent time period (e.g., 3 years)</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(d)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>63.6(e)(1)(i)</td>
<td>General duty to minimize emissions</td>
<td>Operate to minimize emissions at all times; information Administrator will use to determine if operation and maintenance requirements were met.</td>
<td>No. See § 63.11115 for general duty requirement.</td>
</tr>
<tr>
<td>63.6(e)(1)(ii)</td>
<td>Requirement to correct malfunctions ASAP</td>
<td>Owner or operator must correct malfunctions as soon as possible.</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(e)(2)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§ 63.6(e)(3)</td>
<td>Startup, Shutdown, and Malfunction (SSM) Plan</td>
<td>Requirement for SSM plan; content of SSM plan; actions during SSM</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(f)(1)</td>
<td>Compliance Except During SSM</td>
<td>You must comply with emission standards at all times except during SSM</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(f)(2)-(3)</td>
<td>Methods for Determining Compliance</td>
<td>Compliance based on performance test, operation and maintenance plans, records, inspection</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.6(g)(1)-(3)</td>
<td>Alternative Standard</td>
<td>Procedures for getting an alternative standard</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.6(h)(1)</td>
<td>Compliance with Opacity/Visible Emission (VE) Standards</td>
<td>You must comply with opacity/VE standards at all times except during SSM</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(2)(i)</td>
<td>Determining Compliance with Opacity/VE Standards</td>
<td>If standard does not State test method, use EPA Method 9 for opacity in appendix A of part 60 of this chapter and EPA Method 22 for VE in appendix A of part 60 of this chapter</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(2)(ii)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citation</td>
<td>Subject</td>
<td>Brief description</td>
<td>Applies to subpart CCCCCC</td>
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</tr>
<tr>
<td>§ 63.6(h)(2)(iii)</td>
<td>Using Previous Tests To Demonstrate Compliance With Opacity/VE Standards</td>
<td>Criteria for when previous opacity/VE testing can be used to show compliance with this subpart</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(3)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§ 63.6(h)(4)</td>
<td>Notification of Opacity/VE Observation Date</td>
<td>Must notify Administrator of anticipated date of observation</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(5)(i), (iii)-(v)</td>
<td>Conducting Opacity/VE Observations</td>
<td>Dates and schedule for conducting opacity/VE observations</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(5)(ii)</td>
<td>Opacity Test Duration and Averaging Times</td>
<td>Must have at least 3 hours of observation with 30 6-minute averages</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(6)</td>
<td>Records of Conditions During Opacity/VE Observations</td>
<td>Must keep records available and allow Administrator to inspect</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(7)(i)</td>
<td>Report Continuous Opacity Monitoring System (COMS) Monitoring Data From Performance Test</td>
<td>Must submit COMS data with other performance test data</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(7)(ii)</td>
<td>Using COMS Instead of EPA Method 9</td>
<td>Can submit COMS data instead of EPA Method 9 results even if rule requires EPA Method 9 in appendix A of part 60 of this chapter, but must notify Administrator before performance test</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(7)(iii)</td>
<td>Averaging Time for COMS During Performance Test</td>
<td>To determine compliance, must reduce COMS data to 6-minute averages</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(7)(iv)</td>
<td>COMS Requirements</td>
<td>Owner/operator must demonstrate that COMS performance evaluations are conducted according to § 63.8(e); COMS are properly maintained and operated according to § 63.8(c) and data quality as § 63.8(d)</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(7)(v)</td>
<td>Determining Compliance with Opacity/VE Standards</td>
<td>COMS is probable but not conclusive evidence of compliance with opacity standard, even if EPA Method 9 observation shows otherwise. Requirements for COMS to be probable evidence proper maintenance, meeting Performance Specification 1 in appendix B of part 60 of this chapter, and data have not been altered</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(8)</td>
<td>Determining Compliance with Opacity/VE Standards</td>
<td>Administrator will use all COMS, EPA Method 9 (in appendix A of part 60 of this chapter), and EPA Method 22 (in appendix A of part 60 of this chapter) results, as well as information about operation and maintenance to determine compliance</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(9)</td>
<td>Adjusted Opacity Standard</td>
<td>Procedures for Administrator to adjust an opacity standard</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(i)(1)-(14)</td>
<td>Compliance Extension</td>
<td>Procedures and criteria for Administrator to grant compliance extension</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.6(j)</td>
<td>Presidential Compliance Exemption</td>
<td>President may exempt any source from requirement to comply with this subpart</td>
<td>Yes.</td>
</tr>
<tr>
<td>Citation</td>
<td>Subject</td>
<td>Brief description</td>
<td>Applies to subpart CCCCCC</td>
</tr>
<tr>
<td>---------------</td>
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<td>------------------------------------------------------------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>§ 63.7(a)(2)</td>
<td>Performance Test Dates</td>
<td>Dates for conducting initial performance testing; must conduct 180 days after compliance date</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(a)(3)</td>
<td>CAA Section 114 Authority</td>
<td>Administrator may require a performance test under CAA section 114 at any time</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(b)(1)</td>
<td>Notification of Performance Test</td>
<td>Must notify Administrator 60 days before the test</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(b)(2)</td>
<td>Notification of Re-scheduling</td>
<td>If have to reschedule performance test, must notify Administrator of rescheduled date as soon as practicable and without delay</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(c)</td>
<td>Quality Assurance (QA)/Test Plan</td>
<td>Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(d)</td>
<td>Testing Facilities</td>
<td>Requirements for testing facilities</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(e)(1)</td>
<td>Conditions for Conducting Performance Tests</td>
<td>Performance test must be conducted under representative conditions</td>
<td>No, § 63.11120(c) specifies conditions for conducting performance tests.</td>
</tr>
<tr>
<td>§ 63.7(e)(2)</td>
<td>Conditions for Conducting Performance Tests</td>
<td>Must conduct according to this subpart and EPA test methods unless Administrator approves alternative</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(e)(3)</td>
<td>Test Run Duration</td>
<td>Must have three test runs of at least 1 hour each; compliance is based on arithmetic mean of three runs; conditions when data from an additional test run can be used</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(f)</td>
<td>Alternative Test Method</td>
<td>Procedures by which Administrator can grant approval to use an intermediate or major change, or alternative to a test method</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(g)</td>
<td>Performance Test Data Analysis</td>
<td>Must include raw data in performance test report; must submit performance test data 60 days after end of test with the Notification of Compliance Status; keep data for 5 years</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(h)</td>
<td>Waiver of Tests</td>
<td>Procedures for Administrator to waive performance test</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.8(a)(1)</td>
<td>Applicability of Monitoring Requirements</td>
<td>Subject to all monitoring requirements in standard</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.8(a)(2)</td>
<td>Performance Specifications</td>
<td>Performance Specifications in appendix B of 40 CFR part 60 apply</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.8(a)(3)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§ 63.8(a)(4)</td>
<td>Monitoring of Flares</td>
<td>Monitoring requirements for flares in § 63.11 apply</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.8(b)(1)</td>
<td>Monitoring</td>
<td>Must conduct monitoring according to standard unless Administrator approves alternative</td>
<td>Yes.</td>
</tr>
<tr>
<td>Citation</td>
<td>Subject</td>
<td>Brief description</td>
<td>Applies to subpart CCCCCC</td>
</tr>
<tr>
<td>--------------------------</td>
<td>----------------------------------------</td>
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</tr>
<tr>
<td>§ 63.8(b)(2)-(3)</td>
<td>Multiple Effluents and Multiple</td>
<td>Specific requirements for installing monitoring systems; must install on each affected source or after combined with another affected source before it is released to the atmosphere provided the monitoring is sufficient to demonstrate compliance with the standard; if more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup</td>
<td>No.</td>
</tr>
<tr>
<td></td>
<td>Monitoring Systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§ 63.8(c)(1)</td>
<td>Monitoring System Operation and</td>
<td>Maintain monitoring system in a manner consistent with good air pollution control practices</td>
<td>No.</td>
</tr>
<tr>
<td></td>
<td>Maintenance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§ 63.8(c)(1)(i)-(iii)</td>
<td>Operation and Maintenance of</td>
<td>Must maintain and operate each CMS as specified in § 63.6(e)(1); must keep parts for routine repairs readily available; must develop a written SSM plan for CMS, as specified in § 63.6(e)(3)</td>
<td>No.</td>
</tr>
<tr>
<td></td>
<td>Continuous Monitoring Systems (CMS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§ 63.8(c)(2)-(8)</td>
<td>CMS Requirements</td>
<td>Must install to get representative emission or parameter measurements; must verify operational status before or at performance test</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(d)</td>
<td>CMS Quality Control</td>
<td>Requirements for CMS quality control, including calibration, etc.; must keep quality control plan on record for 5 years; keep old versions for 5 years after revisions</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(e)</td>
<td>CMS Performance Evaluation</td>
<td>Notification, performance evaluation test plan, reports</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(f)(1)-(5)</td>
<td>Alternative Monitoring Method</td>
<td>Procedures for Administrator to approve alternative monitoring</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(f)(6)</td>
<td>Alternative to Relative Accuracy Test</td>
<td>Procedures for Administrator to approve alternative relative accuracy tests for continuous emissions monitoring system (CEMS)</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(g)</td>
<td>Data Reduction</td>
<td>COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least 4 equally spaced data points; data that cannot be used in average</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.9(a)</td>
<td>Notification Requirements</td>
<td>Applicability and State delegation</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.9(b)(1)-(2), (4)-(5)</td>
<td>Initial Notifications</td>
<td>Submit notification within 120 days after effective date; notification of intent to construct/reconstruct, notification of commencement of construction/reconstruction, notification of startup; contents of each</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.9(c)</td>
<td>Request for Compliance Extension</td>
<td>Can request if cannot comply by date or if installed best available control technology or lowest achievable emission rate</td>
<td>Yes.</td>
</tr>
<tr>
<td>Citation</td>
<td>Subject</td>
<td>Brief description</td>
<td>Applies to subpart CCCCCC</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>§ 63.9(d)</td>
<td>Notification of Special Compliance Requirements for New Sources</td>
<td>For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.9(e)</td>
<td>Notification of Performance Test</td>
<td>Notify Administrator 60 days prior</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.9(f)</td>
<td>Notification of VE/Opacity Test</td>
<td>Notify Administrator 30 days prior</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.9(g)</td>
<td>Additional Notifications when Using CMS</td>
<td>Notification of performance evaluation; notification about use of COMS data; notification that exceeded criterion for relative accuracy alternative</td>
<td>Yes, however, there are no opacity standards.</td>
</tr>
<tr>
<td>§ 63.9(h)(1)-(6)</td>
<td>Notification of Compliance Status</td>
<td>Contents due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after; when to submit to Federal vs. State authority</td>
<td>Yes, however, there are no opacity standards.</td>
</tr>
<tr>
<td>§ 63.9(i)</td>
<td>Adjustment of Submittal Deadlines</td>
<td>Procedures for Administrator to approve change when notifications must be submitted</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.9(j)</td>
<td>Change in Previous Information</td>
<td>Must submit within 15 days after the change</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(a)</td>
<td>Recordkeeping/Reporting</td>
<td>Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(b)(1)</td>
<td>Recordkeeping/Reporting</td>
<td>General requirements; keep all records readily available; keep for 5 years</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(i)</td>
<td>Records related to SSM</td>
<td>Recordkeeping of occurrence and duration of startups and shutdowns</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(ii)</td>
<td>Records related to SSM</td>
<td>Recordkeeping of malfunctions</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(iii)</td>
<td>Maintenance records</td>
<td>Recordkeeping of maintenance on air pollution control and monitoring equipment</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(iv)</td>
<td>Records Related to SSM</td>
<td>Actions taken to minimize emissions during SSM</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(v)</td>
<td>Records Related to SSM</td>
<td>Actions taken to minimize emissions during SSM</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(vi)-(xi)</td>
<td>CMS Records</td>
<td>Malfunctions, inoperative, out-of-control periods</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(xii)</td>
<td>Records</td>
<td>Records when under waiver</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(xiii)</td>
<td>Records</td>
<td>Records when using alternative to relative accuracy test</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(xiv)</td>
<td>Records</td>
<td>All documentation supporting Initial Notification and Notification of Compliance Status</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(b)(3)</td>
<td>Records</td>
<td>Applicability determinations</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(c)</td>
<td>Records</td>
<td>Additional records for CMS</td>
<td>No.</td>
</tr>
<tr>
<td>Citation</td>
<td>Subject</td>
<td>Brief description</td>
<td>Applies to subpart CCCCCC</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------------------------</td>
<td>------------------------------------------------------------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>§ 63.10(d)(1)</td>
<td>General Reporting Requirements</td>
<td>Requirement to report</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(d)(2)</td>
<td>Report of Performance Test Results</td>
<td>When to submit to Federal or State authority</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(d)(3)</td>
<td>Reporting Opacity or VE Observations</td>
<td>What to report and when</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(d)(4)</td>
<td>Progress Reports</td>
<td>Must submit progress reports on schedule if under compliance extension</td>
<td>Yes.</td>
</tr>
</tbody>
</table>
| § 63.10(d)(5) | SSM Reports                            | Contents and submission                                                             | No. See § 63.11126(b) for malfunction reporting requirements. |}
<p>| § 63.10(e)(1)-(2) | Additional CMS Reports              | Must report results for each CEMS on a unit; written copy of CMS performance evaluation; two-three copies of COMS performance evaluation | No.                      |
| § 63.10(e)(3)(i)-(iii) | Reports                    | Schedule for reporting excess emissions                                             | No.                       |
| § 63.10(e)(3)(iv)-(v) | Excess Emissions Reports            | Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§ 63.8(c)(7)-(8) and 63.10(c)(5)-(13) | No.                      |
| § 63.10(e)(3)(iv)-(v) | Excess Emissions Reports            | Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§ 63.8(c)(7)-(8) and 63.10(c)(5)-(13) | No, § 63.11130(K) specifies excess emission events for this subpart. |
| § 63.10(e)(3)(vi)-(viii) | Excess Emissions Report and Summary Report | Requirements for reporting excess emissions for CMS; requires all of the information in §§ 63.10(c)(5)-(13) and 63.8(c)(7)-(8) | No.                      |
| § 63.10(e)(4) | Reporting COMS Data                  | Must submit COMS data with performance test data                                     | No.                       |
| § 63.10(f)   | Waiver for Recordkeeping/Reporting    | Procedures for Administrator to waive                                             | Yes.                      |</p>
<table>
<thead>
<tr>
<th>Citation</th>
<th>Subject</th>
<th>Brief description</th>
<th>Applies to subpart CCCCCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>§ 63.11(b)</td>
<td>Flares</td>
<td>Requirements for flares</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.12</td>
<td>Delegation</td>
<td>State authority to enforce standards</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.13</td>
<td>Addresses</td>
<td>Addresses where reports, notifications, and requests are sent</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.14</td>
<td>Incorporations by Reference</td>
<td>Test methods incorporated by reference</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.15</td>
<td>Availability of Information</td>
<td>Public and confidential information</td>
<td>Yes.</td>
</tr>
</tbody>
</table>

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Operating Permit Renewal

Source Description and Location

<table>
<thead>
<tr>
<th>Source Name:</th>
<th>CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Location:</td>
<td>2700 South Belmont Avenue, Indianapolis, IN 46221</td>
</tr>
<tr>
<td>County:</td>
<td>Marion (Center Township)</td>
</tr>
<tr>
<td>SIC Code:</td>
<td>4952 (Sewerage Systems)</td>
</tr>
<tr>
<td>Permit Renewal No.:</td>
<td>T097-40933-00032</td>
</tr>
<tr>
<td>Permit Reviewer:</td>
<td>Deena Levering</td>
</tr>
</tbody>
</table>

On January 14, 2019, CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant 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 CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant relating to the operation of a stationary municipal treatment plant with sewage sludge incinerators. CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant was issued its second Part 70 Operating Permit Renewal (T097-33066-00032) on October 14, 2014.

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. T097-33066-00032 on October 14, 2014. The source has since received the following approval:

Administrative Amendment No. 097-40394-00032 on September 13, 2018.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

(a) One (1) Nichols multiple hearth sewage sludge incinerator, identified as I1, constructed in 1970 and modified in 2014, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-1) for control of PM and metals, one (1) venturi wet scrubber (HFINSR301) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-1) for control of organics, and one (1) activated carbon adsorber (AC-1) for polishing of organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I1 with a capacity of 22.5 million Btu/hr total. A CEMS is used for CO.

This unit is a new affected source under 40 CFR 60, Subpart LLLL.
This unit is an affected source under 40 CFR 61, Subpart C.
This unit is an affected source under 40 CFR 61, Subpart E.

(b) One (1) Nichols multiple hearth sewage sludge incinerator, identified as I2, constructed in 1970 and rehabilitated in 2003, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-2) for control of PM and metals, one (1) venturi wet scrubber (HFINSR302) for control of PM and acid gases,
one (1) regenerative thermal oxidizer (RTO-2) for control of organics, and one (1) activated carbon adsorber (AC-2) for polishing of organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I2, with a capacity of 22.5 Million BTU/hr total. A CEMS is used for CO.

This unit is a new affected source under 40 CFR 60, Subpart LLLL.
This unit is an affected source under 40 CFR 61, Subpart C.
This unit is an affected source under 40 CFR 61, Subpart E.

(c) One (1) Nichols multiple hearth sewage sludge incinerator, identified as I3, constructed in 1970 and modified in 2015, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-3) for control of PM and metals, one (1) venturi wet scrubber (HFINSR303) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-3) for control of organics, and one (1) activated carbon adsorber (AC-3) for polishing of organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I3 with a capacity of 22.5 million BTU/hr total. A CEMS is used for CO.

This unit is a new affected source under 40 CFR 60, Subpart LLLL.
This unit is an affected source under 40 CFR 61, Subpart C.
This unit is an affected source under 40 CFR 61, Subpart E.

(d) One (1) Nichols multiple hearth sewage sludge incinerator, identified as I4, constructed in 1970 and modified in 2015, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-4) for control of PM and metals, one (1) venturi wet scrubber (HFINSR304) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-4) for control of organics, and one (1) activated carbon adsorber (AC-4) for polishing organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I4 with a capacity of 22.5 million BTU/hr total. A CEMS is used for CO.

This unit is a new affected source under 40 CFR 60, Subpart LLLL.
This unit is an affected source under 40 CFR 61, Subpart C.
This unit is an affected source under 40 CFR 61, Subpart E.

(e) One (1) Stone Johnston Corp. natural gas boiler with serial number 843402, identified as B2, constructed in 1987, with a maximum heat input capacity of 12.6 million BTU per hour, using no controls, and exhausting to stack No. 09.

(f) One (1) Stone Johnston Corp. natural gas boiler with serial number 843403, identified as B3, constructed in 1987, with a maximum heat input capacity of 12.6 million BTU per hour, using no controls, and exhausting to stack No. 10.

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

The source has removed the following emission units:

(a) One (1) natural gas fired space heater.

(b) Two (2) machine room natural gas boiler, each with maximum heat input capacity of 0.538 MMBtu/hr.

(c) One (1) hydraulic oil tank, identified as Tank 093, with a maximum capacity of 550 gallons.
Insignificant Activities

The source also consists of the following insignificant activities:

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

(b) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu per hour.

(c) Emergency diesel generators not exceed 1600 horsepower:

1. One (1) diesel-fired emergency generator, identified as Generator-1, constructed in 1988, with a maximum output rating of 480 hp.
   This unit is an existing affected source under 40 CFR 63, Subpart ZZZZ.

2. One (1) diesel-fired emergency generator, identified as Generator-8, constructed in 2010, with a maximum output rating of 525 hp.
   This unit is a new affected source under 40 CFR 60, Subpart IIII.
   This unit is a new affected source under 40 CFR 63, Subpart ZZZZ.

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

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

(f) Space heaters, process heaters, heat treat furnaces, or boilers using natural gas fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.

1. Twenty-three (23) natural gas fired space heaters, with a combined maximum heat input capacity of 4.0 MMBtu/hr.

2. Three (3) natural gas fired hot water heaters, with a combined maximum heat input capacity of 1.0 MMBtu/hr.

3. Eight (8) natural gas fired make up air units, with a combined maximum heat input capacity of 7.73 MMBtu/hr.

4. One (1) Landa natural gas fired power washer unit, with a maximum heat input capacity of 0.35 MMBtu/hr.

5. Five (5) natural gas fired flue gas condensing boilers, identified as B1a through B1e, approved in 2018 for construction, with a maximum capacity of 2.0 MMBtu/hr each, using low NOx burners, and exhausting to stack 08.

(g) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, vehicles, having a storage capacity less than or equal to 10,500 gallons. Such storage tanks may be in a fixed location or on mobile equipment.

1. One (1) gasoline storage tank, identified as Tank 029, with a maximum capacity of 10,000 gallons, and a throughput of 58,000 gallons per year.
This unit is an affected source under 40 CFR 63, Subpart CCCCCC.

(h) One (1) diesel storage tank, identified as Tank 030, constructed in 1995, with a maximum capacity of 8,000 gallons, and a throughput of 59,000 gallons per year.

(i) The following VOC or HAP storage containers:

(1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughput less than 12,000 gallons.

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

(i) One (1) used oil storage tank, identified as Tank 084A, with a maximum capacity of 2,000 gallons;

(ii) Four (4) virgin lubricating oil tanks, with a maximum capacity of 200 gallons each.

(iii) One (1) used oil storage tank, identified as Tank 092, with a maximum capacity of 550 gallons.

(j) Filling drums, pails, or other packaging containers with lubricating oils, waxes, and greases.

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

(l) Cleaners and solvents characterized as follows: (a) having a vapor pressure equal to or less than 2 kPa (15 mm Hg) or 0.1 psi measured at 38 °C (100 °F) or; (b) having a vapor pressure equal to or less than 0.7 kPa (5 mm Hg) or 0.1 psi measured at 20 °C (68 °F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

(m) Closed loop heating and cooling systems.

(n) Activities associated with the transportation and treatment of sanitary sewage, provided discharge to the treatment plant is under the control of the owner/operator, that is, an on-site sewage treatment facility.

(o) Noncontact cooling tower systems with natural draft cooling towers not regulated under a NESHAP.

(p) Stockpiled soils from soil remediation activities that are covered and waiting transport for disposal.

(q) On-site fire and emergency response training approved by the department.

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

(s) Unloading of septage from trucks.

(t) Transport, loading, and unloading of incinerator ash (including quenching of ash).

(u) Collection of recoverable waste oil.

(v) Routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process, including purging of gas lines and purging of vessels. [326 IAC 2-7-1(21)(G)(xvii)]

(w) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks and fluid handling equipment. [326 IAC 2-7-1(21)(G)(xvii)]
(x) Purge double block and bleed valves. [326 IAC 2-7-1(21)(G)(xvii)]

(y) Equipment related to manufacturing activities not resulting in the emission of HAPs; brazing equipment, cutting torches, soldering equipment, welding equipment.

(z) Other categories with emissions below insignificant thresholds:

1. A sludge ash monofill that was capped in 1999 but was previously used for the on-site disposal of ash (bottom ash and ash collected from the scrubbers) from the incineration of sewage sludge.

2. Wastewater treatment operations which includes plant influent systems, headworks trash rake building, headworks raw sewage pump building, headworks bar screen building, headworks grit chambers, Southport gate structure, primary treatment systems, grease and scum building, primary effluent diversion structure, pig retrieval structure, bio-roughing, nitrification system, effluent filter building and disinfection system, gravity belt thickening, and dewatering operations. No affected industrial source(s) of wastewater subject to specific NESHAP requirements for their wastewater treatment have provided notification of their intention to discharge their wastewater subject to NESHAP requirements as a method to comply with their compliance requirements.

<table>
<thead>
<tr>
<th>Emission Units and Pollution Control Equipment Constructed Under the Provisions of 326 IAC 2-1.1-3 (Exemptions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>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):</td>
</tr>
<tr>
<td>(a) Two (2) natural gas fired boilers, each with a maximum heat input capacity of 0.505 MMBtu/hr.</td>
</tr>
<tr>
<td>(b) One (1) natural gas fired hot water heater, with a maximum heat input capacity of 0.1999 MMBtu/hr.</td>
</tr>
<tr>
<td>(c) Six (6) natural gas fired make up air units, with a combined maximum heat input capacity of 6.092 MMBtu/hr.</td>
</tr>
<tr>
<td>(d) One (1) natural gas fired space heater, with a maximum heat input capacity of 0.250 MMBtu/hr.</td>
</tr>
</tbody>
</table>

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) through (G) 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 modification approval requirements under 326 IAC 2-7-10.5, 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.

<table>
<thead>
<tr>
<th>Enforcement Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are no enforcement actions pending.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emission Calculations</th>
</tr>
</thead>
<tbody>
<tr>
<td>See Appendix A of this Technical Support Document for detailed emission calculations.</td>
</tr>
</tbody>
</table>
## County Attainment Status

The source is located in Marion County (Center Township).

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SO\textsubscript{2}</strong></td>
<td>Nonattainment effective October 4, 2013, for the 2010 SO\textsubscript{2} standard for Center, Perry, and Wayne townships. Better than national standards for the remainder of the county.</td>
</tr>
<tr>
<td><strong>CO</strong></td>
<td>Attainment effective February 18, 2000, for the part of the city of Indianapolis bounded by 11\textsuperscript{th} Street on the north; Capitol Avenue on the west; Georgia Street on the south; and Delaware Street on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of Indianapolis and Marion County.</td>
</tr>
<tr>
<td><strong>O\textsubscript{3}</strong></td>
<td>Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard.\textsuperscript{1}</td>
</tr>
<tr>
<td><strong>PM\textsubscript{2.5}</strong></td>
<td>Unclassifiable or attainment effective April 15, 2015, for the 2012 annual PM\textsubscript{2.5} standard.</td>
</tr>
<tr>
<td><strong>PM\textsubscript{2.5}</strong></td>
<td>Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour PM\textsubscript{2.5} standard.</td>
</tr>
<tr>
<td><strong>PM\textsubscript{10}</strong></td>
<td>Unclassifiable effective November 15, 1990.</td>
</tr>
<tr>
<td><strong>NO\textsubscript{2}</strong></td>
<td>Unclassifiable or attainment effective January 29, 2012, for the 2010 NO\textsubscript{2} standard.</td>
</tr>
<tr>
<td><strong>Pb</strong></td>
<td>Unclassifiable or attainment effective December 31, 2011, for the 2008 lead standard.</td>
</tr>
</tbody>
</table>

\textsuperscript{1}Attainment effective October 18, 2000, for the 1-hour ozone standard for the Indianapolis area, including Marion County and is a maintenance area for the 1-hour ozone National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X. The 1-hour designation was revoked effective June 15, 2005.

### (a) Ozone Standards

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

### (b) PM\textsubscript{2.5}

Marion County has been classified as attainment for PM\textsubscript{2.5}. Therefore, direct PM\textsubscript{2.5}, SO\textsubscript{2}, and NO\textsubscript{x} emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

### (c) SO\textsubscript{2}

U.S. EPA, in the Federal Register Notice 78 FR 47191 dated August 5, 2013, designated Marion County, Center Township, as nonattainment for SO\textsubscript{2}. Therefore, SO\textsubscript{2} emissions were reviewed pursuant to the requirements of Emission Offset, 326 IAC 2-3.

### (d) Other Criteria Pollutants

Marion 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

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). However, there is an applicable New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants that was in effect on August 7, 1980 (40 CFR 61, Subpart C (National Emission Standard for Beryllium) and 40 CFR 61, Subpart E (National Emission Standard for Mercury); therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.
The fugitive emissions of hazardous air pollutants (HAP) are counted toward the determination of Part 70 Permit applicability and source status under Section 112 of the Clean Air Act (CAA).

Greenhouse Gas (GHG) Emissions

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at [http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf](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>PM$^1$</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>Total PTE of Entire Source Excluding Fugitives$^*$</td>
</tr>
<tr>
<td>Title V Major Source Thresholds</td>
</tr>
<tr>
<td>PSD Major Source Thresholds</td>
</tr>
<tr>
<td>Emission Offset Major Source Thresholds</td>
</tr>
</tbody>
</table>

1. Under the Part 70 Permit program (40 CFR 70), PM$_{10}$ and PM$_{2.5}$, not particulate matter (PM), are each considered as a "regulated air pollutant."
2. PM$_{2.5}$ listed is direct PM$_{2.5}$.
3. Single highest source-wide HAP

*Fugitive HAP emissions are always included in the source-wide emissions.

Appendix A of this TSD reflects the detailed unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(30)) of PM$_{10}$ PM$_{2.5}$ SO$_2$ NO$_x$ VOC CO are equal to or greater than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(30)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(30)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. The source will be issued a Part 70 Operating Permit Renewal.
Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

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 Part 70 permit renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

<table>
<thead>
<tr>
<th>Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)</th>
<th>PM₁</th>
<th>PM₁₀₁</th>
<th>PM₂.₅₁,₂</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>GHG as CO₂e</th>
<th>Single HAP³</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PTE of Entire Source Excluding Fugitives*</td>
<td>73.61</td>
<td>4557.99</td>
<td>4557.99</td>
<td>1276.15</td>
<td>265.02</td>
<td>82.04</td>
<td>988.21</td>
<td>200036.80</td>
<td>9.93</td>
<td>24.82</td>
</tr>
<tr>
<td>Total PTE of Entire Source</td>
<td>73.61</td>
<td>4557.99</td>
<td>4557.99</td>
<td>1276.15</td>
<td>265.02</td>
<td>82.04</td>
<td>988.21</td>
<td>200036.80</td>
<td>9.93</td>
<td>24.82</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>100,000</td>
<td>10</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>PSD Major Source Thresholds</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>---</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>100,000</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Emission Offset Major Source Thresholds</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>100</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

*Under the Part 70 Permit program (40 CFR 70), PM₁₀ and PM₂.₅, not particulate matter (PM), are each considered as a "regulated air pollutant."
²PM₂.₅ listed is direct PM₂.₅.
³Single highest source-wide HAP.
*Fugitive HAP emissions are always included in the source-wide emissions.

Appendix A of this TSD reflects the detailed 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 2-3 (Emission Offset) not applicable to this source and to render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA). See Technical Support Document (TSD) State Rule Applicability - Entire Source section, 326 IAC 2-8 (FESOP), 326 IAC 2-3 (Emission Offset), and 326 IAC 20 (Hazardous Air Pollutants) for more information regarding the limit(s).

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because the potential to emit of a PSD regulated pollutant, PM₁₀, PM₂.₅, NOₓ and CO, is greater than 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is a major stationary source, under Emission Offset (326 IAC 2-3), because the potential to emit of SO₂ a nonattainment regulated pollutant, is greater than 100 tons per year or more.
(c) 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 Emissions Guidelines and Compliance Times for Large Municipal Waste Combustors that are Constructed on or Before September 20, 1994, 40 CFR 60, Subpart Cb and 326 IAC 12, are not included in the permit for the four (4) sewage sludge incinerators, because this source does not combust municipal waste. Also, pursuant to the definitions under §60.51(a), "incinerator means any furnace used in the process of burning solid waste..." and under §60.51(b), "solid waste means refuse, more than 50 percent of which is municipal type waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustibles, and noncombustible materials such as a glass and rock." These four (4) incinerators are combusting sludge which does not meet the definition of solid waste and therefore does not meet the definition of incinerator under this subpart.

(b) The requirements of the New Source Performance Standard for Industrial-Commercial-Institutional Steam Generating Units 40 CFR 60, Subpart Db and 326 IAC 12, are not included in the permit for the natural gas fired boilers B2 and B3 and the small natural gas fired boilers, because none of the boilers have a heat input capacity greater than 100 million British thermal units per hour (MMBtu/hr).

(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 the natural gas fired boilers B2 and B3 and the small natural gas fired boilers, because the natural gas fired boilers B2 and B3 were constructed prior to June 9, 1989 (constructed in 1987) and the other small boilers do not have a heat input capacity greater than 10 MMBtu/hr.

(d) The requirements of the New Source Performance Standard for Incinerators 40 CFR 60, Subpart E and 326 IAC 12, are not included in the permit for the four (4) sewage sludge incinerators, because pursuant to the definitions under §60.51(a), "incinerator means any furnace used in the process of burning solid waste..." and under §60.51(b), "solid waste means refuse, more than 50 percent of which is municipal type waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustibles, and noncombustible materials such as a glass and rock." These four (4) incinerators are combusting sludge which does not meet the definition in Subpart E of solid waste and therefore does not meet the definition of incinerator under this subpart.

(e) The requirements of the New Source Performance Standard for Volatiles Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, 40 CFR 60, Subpart Kb and 326 IAC 12, are not included in the permit for storage tanks, because none of the petroleum storage tanks have a storage capacity equal to or greater than 75 cubic meters (19,812.9 gallons).

(f) The requirements of the New Source Performance Standard for Sewage Treatment Plants 40 CFR 60, Subpart O and 326 IAC 12, are not included in the permit for the four (4) incinerators, because the incinerators were constructed prior to June 11, 1973 and have not been modified as defined in §60.14 (Modification). Pursuant to §60.14(e)(5), the addition of control devices are not considered modifications. Therefore, the 2014 modification to the incinerators, is not considered a modification pursuant to this subpart.
The requirements of the New Source Performance Standard for Commercial and Industrial Solid Waste Incineration Units 40 CFR 60, Subpart CCCC and 326 IAC 12, are not included in the permit for four (4) sewage sludge incinerators, because pursuant to 60.2020(n), sewage sludge incineration units subject to 40 CFR 60, Subpart LLLL are exempt from subpart CCCC.

The requirements of the New Source Performance Standard for Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units 40 CFR 60, Subpart DDDD and 326 IAC 12, are not included in the permit for the four (4) sewage sludge incinerators, because pursuant to 40 CFR 60.2555(i) the incinerators are exempt from being included in a state plan since they are subject to 40 CFR 60, Subpart LLLL.

The requirements of the New Source Performance Standard for Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006 40 CFR 60, Subpart EEEE and the requirements of the New Source Performance Standard for Emission Guidelines and Compliance Times for Other Solid Waste Incineration Units that Commenced Construction On or Before December 9, 1994 40 CFR 60, Subpart FFFF and 326 IAC 12, are not included in the permit for the four (4) sewage sludge incinerators.

Section 129 of the Clean Air Act directs the EPA to establish performance standards for solid waste incineration units. Pursuant to the Act, these standards apply to any unit that incinerates any solid waste. Under these provisions, the EPA defined sewage sludge as a subcategory of solid waste for regulation with standards developed pursuant to Section 111. This triggered the development of emissions standards for existing and new/modified sewage sludge incinerators.

Pursuant to Section 129, the EPA also developed emission standards for municipal solid waste (MSW), hazardous waste combustors (HWC), commercial/industrial solid waste incinerators (CISWI), hospital/medical/infectious waste (HMIWI) and other solid waste incinerators (OSWI). Each of these regulations applies to incinerators that use as a feedstock the specific waste regulated by the subcategory.

For the four (4) sewage sludge incinerators, because sewage sludge is the solid waste incinerated, they are subject to only the rules promulgated on March 21, 2011, for sewage sludge incinerator units (40 CFR 60, Subpart LLLL). The regulations for the other subcategories of solid waste incineration do not apply because sewage sludge does not meet the definition of each of these subcategories.

The requirements of the New Source Performance Standard for New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines 40 CFR 60, Subpart IIII and 326 IAC 12, are not included in the permit for diesel fired emergency generator (Generator-1), because this generator was constructed prior to July 11, 2005 and manufactured prior to April 1, 2006. It was constructed in 1988.

The diesel fired emergency generator (Generator-8) is subject to the New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines 40 CFR 60, Subpart IIII and 326 IAC 12, because it is a compression ignition internal combustion engine that was manufactured after April 1, 2006. The unit subject to this rule includes the following:

One (1) diesel-fired emergency generator, identified as Generator-8, constructed in 2010, with a maximum output rating of 525 hp.

The unit is subject to the following portions of Subpart IIII.

(1) 40 CFR 60.4200(a)(2)(i) and (c);
(2) 40 CFR 60.4205(b);
(3) 40 CFR 60.4206;
(4) 40 CFR 60.4207(b);
(5) 40 CFR 60.4209(a);  
(6) 40 CFR 60.4211(a), (c), (f)(1), (f)(2)(i), (f)(3) and (g)(3);  
(7) 40 CFR 60.4212(a);  
(8) 40 CFR 60.4214(b);  
(9) 40 CFR 60.4218;  
(10) 40 CFR 60.4219;  
(11) Table 5 to Subpart III of Part 60; and  
(12) Table 8 to Subpart III of Part 60;  

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the diesel fired emergency generator 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 strike-through 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  

(k) The four (4) sewage sludge incinerators are subject to the New Source Performance Standards for New Sewage Sludge Incineration Units 40 CFR 60, Subpart LLLL and 326 IAC 12, because the incinerators have undergone a change that meets the definition of "modification", as defined by 40 CFR 60.4775 and are therefore no longer "existing" units per this subpart. The units subject to this rule includes the following:
One (1) Nichols multiple hearth sewage sludge incinerator, identified as I1, constructed in 1970 and modified in 2014, with a design capacity of 2.6 dry tons per hour, using one (1) wet electrostatic precipitator (WESP-1) for PM, HCl, dioxins/furans, mercury, NOx, SO2, cadmium, and lead control, one (1) scrubber (HFINSR301) for PM, HCl, dioxins/furans, mercury, NOx, SO2, cadmium and lead control, one (1) regenerative thermal oxidizer (RTO-1) for CO and D/F control, and one (1) activated carbon adsorber (AC-1) for D/F control as controls, and exhausting to stack No. 01. Nine (9) natural gas fired auxiliary low NOx burners also included as I1 with a capacity of 22.5 million Btu/hr total. A CEMS is used for CO.

One (1) Nichols multiple hearth sewage sludge incinerator, identified as I2, constructed in 1970 and rehabilitated in 2003, with a design capacity of 2.6 dry tons per hour, using a wet electrostatic precipitator (WESP-2) for PM, HCl, dioxins/furans, mercury, NOx, SO2, cadmium, and lead control, one (1) scrubber (HFINSR302) for PM, HCl, dioxins/furans, mercury, NOx, SO2, cadmium and lead control, one (1) regenerative thermal oxidizer (RTO-2) for CO and D/F control, and one (1) activated carbon adsorber (AC-2) for D/F control as controls, and exhausting to stack No. 01. Nine (9) natural gas fired auxiliary low NOx burners also included as I2, with a capacity of 22.5 Million BTU/hr total. A CEMS is used for CO.

One (1) Nichols multiple hearth sewage sludge incinerator, identified as I3, constructed in 1970 and modified in 2015, with a design capacity of 2.6 dry tons per hour, using a wet electrostatic precipitator (WESP-3) for PM, HCl, dioxins/furans, mercury, NOx, SO2, cadmium, and lead control, one (1) scrubber (HFINSR303) for PM, HCl, dioxins/furans, mercury, NOx, SO2, cadmium and lead control, One (1) regenerative thermal oxidizer (RTO-3) for CO and D/F control, and one (1) activated carbon adsorber (AC-3) for D/F control as controls, and exhausting to stack No. 01. Nine (9) natural gas fired auxiliary low NOx burners also included as I3 with a capacity of 22.5 million BTU/hr total. A CEMS is used for CO.

One (1) Nichols multiple hearth sewage sludge incinerator, identified as I4, constructed in 1970 and modified in 2015, with a design capacity of 2.6 dry tons per hour, using a wet electrostatic precipitator (WESP-4) for PM, HCl, dioxins/furans, mercury, NOx, SO2, cadmium, and lead control, one (1) scrubber (HFINSR304) for PM, HCl, dioxins/furans, mercury, NOx, SO2, cadmium and lead control, one (1) regenerative thermal oxidizer (RTO-4) for CO and D/F control, and one (1) activated carbon adsorber (AC-4) for D/F control as controls, and exhausting to stack No. 01. Nine (9) natural gas fired auxiliary low NOx burners also included as I4 with a capacity of 22.5 million BTU/hr total. A CEMS is used for CO.

These units are subject to the following portions of Subpart LLLL:

1. 40 CFR 60.4760;
2. 40 CFR 60.4765;
3. 40 CFR 60.4770;
4. 40 CFR 60.4775(a)(2);
5. 40 CFR 60.4780;
6. 40 CFR 60.4785;
7. 40 CFR 60.4790;
8. 40 CFR 60.4795;
9. 40 CFR 60.4810;
10. 40 CFR 60.4815;
11. 40 CFR 60.4820;
12. 40 CFR 60.4825;
13. 40 CFR 60.4830;
14. 40 CFR 60.4835;
15. 40 CFR 60.4840;
16. 40 CFR 60.4845;
17. 40 CFR 60.4850(a), (b), (d), (e), (f), (g), and (h);
18. 40 CFR 60.4855;
19. 40 CFR 60.4860;
20. 40 CFR 60.4861;
21. 40 CFR 60.4870;
22. 40 CFR 60.4880(a), (c), (d), (e), and (h);
23. 40 CFR 60.4885;
24. 40 CFR 60.4890;
25. 40 CFR 60.4895;
26. 40 CFR 60.4900;
27. 40 CFR 60.4905;
28. 40 CFR 60.4910;
29. 40 CFR 60.4915;
30. 40 CFR 60.4920;
31. 40 CFR 60.4930;
The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the four (4) sludge incinerators except as otherwise specified in 40 CFR 60, Subpart LLLL.

(l) The requirements of the New Source Performance Standard for Emission Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units 40 CFR 60, Subpart MMMM and 326 IAC 12, are not included in the permit for the four (4) sludge incinerators, because pursuant to 60.5060(b), the incinerators were modified after September 21, 2011 and are therefore subject to 40 CFR 60 Subpart LLLL and no longer subject to the requirements under 40 CFR 60 Subpart MMMM.

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

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

(a) The four (4) sewage sludge incinerators are subject to the National Emission Standards for Hazardous Air Pollutants for Beryllium 40 CFR 61, Subpart C, which is incorporated by reference as 326 IAC 14-3, because the incinerators process beryllium-containing waste. The units subject to this rule include the following:

One (1) Nichols multiple hearth sewage sludge incinerator, identified as I1, constructed in 1970 and modified in 2014, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-1) for control of PM and metals, one (1) venturi wet scrubber (HFINSR301) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-1) for control of organics, and one (1) activated carbon adsorber (AC-1) for polishing of organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I1 with a capacity of 22.5 million Btu/hr total. A CEMS is used for CO.

One (1) Nichols multiple hearth sewage sludge incinerator, identified as I2, constructed in 1970 and rehabilitated in 2003, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-2) for control of PM and metals, one (1) venturi wet scrubber (HFINSR302) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-2) for control of organics, and one (1) activated carbon adsorber (AC-2) for polishing of organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I2, with a capacity of 22.5 Million BTU/hr total. A CEMS is used for CO.

One (1) Nichols multiple hearth sewage sludge incinerator, identified as I3, constructed in 1970 and modified in 2015, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-3) for control of PM and metals, one (1) venturi wet scrubber (HFINSR303) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-3) for control of organics, and one (1) activated carbon adsorber (AC-3) for polishing of organics, and exhausting to stack No. 01.
Nine (9) natural gas fired auxiliary low NOx burners also included as I3 with a capacity of 22.5 million BTU/hr total. A CEMS is used for CO.

One (1) Nichols multiple hearth sewage sludge incinerator, identified as I4, constructed in 1970 and modified in 2015, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-4) for control of PM and metals, one (1) venturi wet scrubber (HFINSR304) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-4) for control of organics, and one (1) activated carbon adsorber (AC-4) for polishing organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I4 with a capacity of 22.5 million BTU/hr total. A CEMS is used for CO.

These emission units are subject to the following portions of Subpart C:

(1) 40 CFR 61.30;
(2) 40 CFR 61.31;
(3) 40 CFR 61.32(a);

The requirements of 40 CFR Part 61, Subpart A – General Provisions, which are incorporated as 326 IAC 14-1, apply to the four (4) incinerators except as otherwise specified in 40 CFR 63, Subpart C.

(b) The four (4) sewage sludge incinerators are subject to the National Emission Standards for Hazardous Air Pollutants for Mercury 40 CFR 61, Subpart E, which is incorporated by reference as 326 IAC 14-5, because the sludge incinerators incinerate wastewater treatment plant sludge. The units subject to this rule include the following:

One (1) Nichols multiple hearth sewage sludge incinerator, identified as I1, constructed in 1970 and modified in 2014, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-1) for control of PM and metals, one (1) venturi wet scrubber (HFINSR301) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-1) for control of organics, and one (1) activated carbon adsorber (AC-1) for polishing of organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I1 with a capacity of 22.5 million Btu/hr total. A CEMS is used for CO.

One (1) Nichols multiple hearth sewage sludge incinerator, identified as I2, constructed in 1970 and rehabilitated in 2003, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-2) for control of PM and metals, one (1) venturi wet scrubber (HFINSR302) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-2) for control of organics, and one (1) activated carbon adsorber (AC-2) for polishing of organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I2, with a capacity of 22.5 Million BTU/hr total. A CEMS is used for CO.

One (1) Nichols multiple hearth sewage sludge incinerator, identified as I3, constructed in 1970 and modified in 2015, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-3) for control of PM and metals, one (1) venturi wet scrubber (HFINSR303) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-3) for control of organics, and one (1) activated carbon adsorber (AC-3) for polishing of organics, and exhausting to stack No. 01.
Nine (9) natural gas fired auxiliary low NOx burners also included as I3 with a capacity of 22.5 million BTU/hr total. A CEMS is used for CO.

One (1) Nichols multiple hearth sewage sludge incinerator, identified as I4, constructed in 1970 and modified in 2015, with a nominal capacity of 2.6 dry tons per hour, equipped with the following air pollution control devices: one (1) wet electrostatic precipitator (WESP-4) for control of PM and metals, one (1) venturi wet scrubber (HFINSR304) for control of PM and acid gases, one (1) regenerative thermal oxidizer (RTO-4) for control of organics, and one (1) activated carbon adsorber (AC-4) for polishing organics, and exhausting to stack No. 01.

Nine (9) natural gas fired auxiliary low NOx burners also included as I4 with a capacity of 22.5 million BTU/hr total. A CEMS is used for CO.

These emission units are subject to the following portions of Subpart E:

(1) 40 CFR 61.50;
(2) 40 CFR 61.51;
(3) 40 CFR 61.52(b);

The requirements of 40 CFR Part 61, Subpart A – General Provisions, which are incorporated as 326 IAC 14-1, apply to the incinerators except as otherwise specified in 40 CFR 61, Subpart E.

(c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs): Publicly Owned Treatment Works 40 CFR 63, Subpart VVV and 326 IAC 20-32 are not included in the permit for this source, since the source is not a major source of HAPs and is not an industrial publicly owned treatment works (POTW) as defined by 40 CFR 63.1595.

(d) The diesel emergency generator (Generator-1) (480 HP) is subject to 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 an existing stationary reciprocating internal combustion engine (RICE) (construction commenced before June 12, 2006) at an area source of hazardous air pollutants (HAP). Construction of the diesel emergency generator (Generator-1) commenced in 1988.

The diesel emergency generator (Generator-1) is subject to the following applicable portions of the NESHAP for existing emergency stationary RICE (construction commenced before June 12, 2006) at an area source of HAP:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(iii) and (iv)
(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 63.6640(a), (b), (e), (f)(1), (f)(2)(i), and (f)(4)
(9) 40 CFR 63.6645(a)(5)
(10) 40 CFR 63.6650
(11) 40 CFR 63.6655
(12) 40 CFR 63.6660
(13) 40 CFR 63.6665
(14) 40 CFR 63.6670
(15) 40 CFR 63.6675
(16) Table 2d (item 4)
(17) Table 6 (item 9)
(18) Table 7 (item 4)
(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 this evaluation, this source is subject to 40 CFR 63, Subpart ZZZZ. On May 4, 2016, the U.S. Court of Appeals for the D.C. Circuit issued a mandate vacating paragraphs 40 CFR 63.6640(f)(2)(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](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.**

(e) The diesel emergency generator (Generator-8) (525 HP) is subject to 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 emergency generator (Generator-8) commenced in 2010.
The diesel emergency generator (Generator-8) is subject to 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)(7)
5. 40 CFR 63.6665
6. 40 CFR 63.6670
7. 40 CFR 63.6675

Pursuant to 40 CFR 63.6665, the diesel emergency generator (Generator-8) does 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.

(f) The gasoline storage tank (Tank 029) is subject to the National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities 40 CFR 63, Subpart CCCCCC, because it is located at an area source. The tank has a monthly throughput of less than 10,000 gallons of gasoline. The units subject to this rule include the following:

One (1) gasoline storage tank, identified as Tank 029, with a maximum capacity of 10,000 gallons, and a throughput of 58,000 gallons per year.

This emission unit is subject to the following portions of Subpart CCCCCC:

1. 40 CFR 63.11110;
2. 40 CFR 63.11111(a), (b), (e), (f), (h), (i), and (j);
3. 40 CFR 63.11112;
4. 40 CFR 63.11113(b), (c), and (f)(1);
5. 40 CFR 63.11115;
6. 40 CFR 63.11116;
7. 40 CFR 63.11125(d);
8. 40 CFR 63.11130;
9. 40 CFR 63.11131;
10. 40 CFR 63.11132;
11. Table 3

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the tank except as otherwise specified in 40 CFR 63, Subpart CCCCCC.

(g) 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 are not included in the permit for boilers, since all the boilers are gas-fired boilers and are not subject to the subpart pursuant to §63.1195(e).

(h) There are no other National Emission Standards for Hazardous Air Pollutants under 40 CFR 63, 326 IAC 14 and 326 IAC 20 included in the permit.

Compliance Assurance Monitoring (CAM):

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing pollutant-specific emission unit that meets the following criteria:

1. has a potential to emit before controls equal to or greater than the major source threshold for the regulated pollutant involved;
2. is subject to an emission limitation or standard for that pollutant (or a surrogate thereof); and
(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

(b) Pursuant to 40 CFR 64.2(b)(1)(i), emission limitations or standards proposed after November 15, 1990 pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act are exempt from the requirements of CAM. Therefore, an evaluation was not conducted for any emission limitations or standards proposed after November 15, 1990 pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act.

The following table is used to identify the applicability of CAM to each emission unit and each emission limitation or standard for a specified pollutant based on the criteria specified under 40 CFR 64.2:

<table>
<thead>
<tr>
<th>Emission Unit/Pollutant</th>
<th>Control Device</th>
<th>Applicable Emission Limitation</th>
<th>Uncontrolled PTE (tons/year)</th>
<th>Controlled PTE (tons/year)</th>
<th>CAM Applicable (Y/N)</th>
<th>Large Unit (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incinerator I1/PM</td>
<td>WESP, Venturi Scrubber</td>
<td>326 IAC 2-3, 40 CFR 60, Subpart LLLL</td>
<td>1,139</td>
<td>&lt;100</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Incinerator I1/ SO2</td>
<td>Venturi Scrubber</td>
<td>326 IAC 7-4-2, 40 CFR 60, Subpart LLLL</td>
<td>318.9</td>
<td>&lt;100</td>
<td>N</td>
<td>N</td>
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<tr>
<td>Incinerator I1/ CO</td>
<td>RTO</td>
<td>40 CFR 60, Subpart LLLL</td>
<td>353.0</td>
<td>&gt;100</td>
<td>N</td>
<td>N</td>
</tr>
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<td>N</td>
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<tr>
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<tr>
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<td>40 CFR 60, Subpart LLLL</td>
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<td>N</td>
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<tr>
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<td>-</td>
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<td>N</td>
</tr>
<tr>
<td>Incinerator I1/ VOC</td>
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<td>N</td>
</tr>
<tr>
<td>Incinerator I1/ Cd</td>
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<td>&lt;10</td>
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<td>N</td>
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<tr>
<td>Incinerator I1/ Pb</td>
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<td>40 CFR 60, Subpart LLLL</td>
<td>1.14</td>
<td>&lt;10</td>
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<td>Incinerator I1/ Phosphorus</td>
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<td>40 CFR 63</td>
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<tr>
<td>Incinerator I2/ CO</td>
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<tr>
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<td>Emission Unit/Pollutant</td>
<td>Control Device</td>
<td>Applicable Emission Limitation</td>
<td>Uncontrolled PTE (tons/year)</td>
<td>Controlled PTE (tons/year)</td>
<td>CAM Applicable (Y/N)</td>
<td>Large Unit (Y/N)</td>
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<tr>
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<td>N</td>
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<tr>
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<td>Incinerator I3/ D/F</td>
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<td>RTO, Activated Carbon Adsorber</td>
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<td>19.4</td>
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<tr>
<td>Incinerator I3/ Cd</td>
<td>WESP</td>
<td>40 CFR 60, Subpart LLLL</td>
<td>0.42</td>
<td>&lt;10</td>
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<td>N</td>
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<tr>
<td>Incinerator I3/ Pb</td>
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<td>40 CFR 60, Subpart LLLL</td>
<td>1.14</td>
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<td>Incinerator I3/ Phosphorus</td>
<td>WESP</td>
<td>40 CFR 63</td>
<td>8.65</td>
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<td>Incinerator I4/PM</td>
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<td>326 IAC 2-3, 40 CFR 60, Subpart LLLL</td>
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<td>Incinerator I4/ SO2</td>
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<td>Incinerator I4/ CO</td>
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<td>40 CFR 60, Subpart LLLL</td>
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<td>Incinerator I4/ HCl</td>
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<td>Incinerator I4/ Hg</td>
<td>WESP</td>
<td>40 CFR 60, Subpart LLLL</td>
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<td>&lt;10</td>
<td>N ¹</td>
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<td>Incinerator I4/ NOx</td>
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<td>N/A</td>
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<td>RTO, Activated Carbon Adsorber</td>
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<td>19.4</td>
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<td>Incinerator I4/ Cd</td>
<td>WESP</td>
<td>40 CFR 60, Subpart LLLL</td>
<td>0.42</td>
<td>&lt;10</td>
<td>N ¹</td>
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<tr>
<td>Emission Unit/Pollutant</td>
<td>Control Device</td>
<td>Applicable Emission Limitation</td>
<td>Uncontrolled PTE (tons/year)</td>
<td>Controlled PTE (tons/year)</td>
<td>CAM Applicable (Y/N)</td>
<td>Large Unit (Y/N)</td>
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<td>Incinerator I4/ Pb WESP</td>
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<td>&lt;10</td>
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<td>Incinerator I4/ Phosphorus WESP</td>
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<td>8.65</td>
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<td>N ¹</td>
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</tbody>
</table>

Uncontrolled PTE (tpy) and controlled PTE (tpy) are evaluated against the Major Source Threshold for each pollutant. Major Source Threshold for criteria pollutants (PM10, PM2.5, SO2, NOX, VOC and CO) is 100 tpy, for a single HAP ten (10) tpy, and for total HAPs twenty-five (25) tpy.

Under the Part 70 Permit program (40 CFR 70), PM is not a regulated pollutant.

For limitations under 326 IAC 6-3-2, 326 IAC 6.5, and 326 IAC 6.8, IDEM OAQ uses PM as a surrogate for the regulated air pollutant PM10. Therefore, uncontrolled PTE and controlled PTE reflect the emissions of the regulated air pollutant PM10.

Pursuant to 40 CFR 64.2(b)(1)(i), emission limitations or standards proposed after November 15, 1990 pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act are exempt from the requirements of CAM. Therefore, an evaluation was not conducted for any emission limitations or standards proposed after November 15, 1990 pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act. The incinerators are subject to 40 CFR 60, Subpart LLLL which was proposed on March 21, 2011.

CAM does not apply because there is no control device to comply with the limitation.

CAM does not apply for VOC because the uncontrolled PTE of VOC is less than the major source threshold.

Controls: BH = Baghouse, C = Cyclone, DC = Dust Collection System, RTO = Regenerative or Recuperative Thermal Oxidizer, WS = Wet Scrubber, WESP = Wet Electrostatic Precipitator

Emission units without air pollution controls are not subject to CAM. Therefore, they are not listed.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM, are not applicable to any of the units as part of this renewal.

### 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.

#### EO Minor Source Limits

**August 21, 1990**

In order to render the requirements of 326 IAC 2-3 (Emission Offset) not applicable to the 1990 permit that was established by the Indianapolis Environmental Resources Management Division in the City of Indianapolis, the Permittee shall comply with the following:

(a) The total particulate matter emissions from all incinerators (I1 through I4) shall not exceed 1.3 lbs/ton;

(b) The total amount of sewage sludge incinerated by all the incinerators (I1 through I4) shall not exceed 62,050 dry tons of sludge per twelve (12) consecutive month period, with compliance determined at the end of each month.

These emission offset limits were established on March 11, 1986 to provide an emission offset for the construction of a trash incinerator at another site owned by the City of Indianapolis because Marion County was non-attainment for particulate matter at the time.
2003 Modification
In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2003 Modification permitted under SSM No. 097-16971-00032, the Permittee shall comply with the following:

(a) The amount of dry sludge delivered to the No. 2 incinerator shall be limited to less than 17,712 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) Emissions of CO from the No. 2 incinerator shall not exceed 51.78 pounds per ton of dry sludge burned.

Compliance with these limits, shall limit the potential to emit of CO to less than 458.528 tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2003 Modification permitted under SSM No. 097-16971-00032.

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 four (4) sewage sludge incinerators are subject to Section 129 of the Clean Air Act (CAA). Under Section 129(h)(2) states "that no solid waste incineration unit subject to performance standards under this section and Section 7411 (section 111) of this title shall be subject to standards under section 7412(d) (section 112(d) of this title". Therefore, pursuant to 326 IAC 2-4.1-1(b)(2), the four (4) sewage sludge incineration units are not subject to the requirements of 326 IAC 2-4.1.

326 IAC 2-6 (Emission Reporting)
This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7 (Part 70). The potential to emit of PM10 is greater than 250 tons per year. Therefore, pursuant to 326 IAC 2-6-3(a)(1), annual reporting is required. An emission statement shall be submitted in accordance with the compliance schedule in 326 IAC 2-6-3 and every year thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 2-7-6(5) (Annual Compliance Certification)
The U.S. EPA Federal Register 79 FR 54978 notice does not exempt Title V Permittees from the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D), but the submittal of the Title V annual compliance certification to IDEM satisfies the requirement to submit the Title V annual compliance certifications to EPA. IDEM does not intend to revise any permits since the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D) still apply, but Permittees can note on their Title V annual compliance certifications that submission to IDEM has satisfied reporting to EPA per Federal Register 79 FR 54978. This only applies to Title V Permittees and Title V compliance certifications.

326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1).

326 IAC 6-4 (Fugitive Dust Emissions Limitations)
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 Marion County) is located in one of the counties listed in 326 IAC 6.5 and it is one of the sources specifically listed in 326 IAC 6.5-6. Therefore, the facilities specifically identified in 326 IAC 6.5-6 are subject to the requirements of 326 IAC 6.5-6. All other facilities not specifically identified in 326 IAC 6.5-6 have a combined unlimited PTE of PM less than 10 tons per year; therefore, the combined actual emissions of PM from these facilities are less than 10 tons per year. Therefore, all other facilities not specifically identified in 326 IAC 6.5-6 are not subject to the requirements of 326 IAC 6.5-1-2 because these facilities have a combined PTE of PM of less than 100 tons per year and actual emissions of PM of less than 10 tons per year.

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

326 IAC 20 (Hazardous Air Pollutants)
In order to render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA), the Permittee shall comply with the following:

(a) The total amount of sewage sludge incinerated by all the incinerators (I1 through I4), shall not exceed 62,050 dry tons of sludge per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) Phosphorus emissions from the sewage sludge incinerators shall not exceed 0.32 pounds per ton of sewage incinerated.

(c) Total HAP emissions from the sewage sludge incinerators shall not exceed 0.76 pounds per ton of sewage incinerated.

Compliance with these limits, combined with the potential to emit HAP from all other emission units at the source, shall limit the source-wide potential to emit single HAP to less than 10 tons per twelve (12) consecutive month period and the source-wide potential to emit total HAPs to less than 25 tons per twelve (12) consecutive month period, and shall render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA).

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**State Rule Applicability – Individual Facilities**

State rule applicability has been reviewed as follows:

**Incinerators (I1 through I4)**

326 IAC 3-5 (Continuous Monitoring of Emissions (CEMs))
Continuous Monitoring of Emissions (CEMs) applicability is discussed under the Compliance Determination and Monitoring Requirement section of this document.

326 IAC 4-2 (Incinerators)
Pursuant 326 IAC 4-2, the requirements of 326 IAC 4-2-2 are applicable to the incinerators (I1 through I4), since each of the sewage sludge incineration units meet the definition of an incinerator, as defined in 326 IAC 1-2-34. Each unit burns waste substances with control on combustion factors.

Pursuant to 326 IAC 4-2-2 (Incinerators), the Permittee shall comply with the following for each of the sewage sludge incineration units (I1 through I4):

(a) All incinerators shall comply with the following requirements:

(1) Consist of primary and secondary chambers or the equivalent.

(2) Be equipped with a primary burner unless burning only wood products.
(3) Comply with 326 IAC 5-1 and 326 IAC 2.

(4) Be maintained, operated, and burn waste in accordance with the manufacturer's specifications or an operation and maintenance plan as specified in subsection (c).

(5) Not emit particulate matter in excess of one (1) of the following:

(A) Three-tenths (0.3) pound of particulate matter per one thousand (1000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air for incinerators with a maximum solid waste capacity of greater than or equal to two hundred (200) pounds per hour corrected to 7 percent (7%) oxygen.

(B) Five-tenths (0.5) pound of particulate matter per one thousand (1000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air for incinerators with solid waste capacity less than two hundred (200) pounds per hour corrected to 7 percent (7%) oxygen.

(6) If any of the requirements of subdivisions (1) through (5) are not met, then the owner or operator shall stop charging the incinerator until adjustments are made that address the underlying cause of the deviation.

(b) An incinerator is exempt from subsection (a)(5) if subject to a more stringent particulate matter emission limit in 40 CFR 52 Subpart P, State Implementation Plan for Indiana.

(c) An owner or operator developing an operation and maintenance plan pursuant to subsection (a)(4) must comply with the following:

(1) The operation and maintenance plan must be designed to meet the particulate matter emission limitation specified in subsection (a)(5) and include the following:

(A) Procedures for receiving, handling, and charging waste.
(B) Procedures for incinerator startup and shutdown.
(C) Procedures for responding to a malfunction.
(D) Procedures for maintaining proper combustion air supply levels.
(E) Procedures for operating the incinerator and associated air pollution control systems.
(F) Procedures for handling ash.
(G) A list of wastes that can be burned in the incinerator.

(2) Each incinerator operator shall review the plan before initial implementation of the operation and maintenance plan and annually thereafter.

(3) The operation and maintenance plan must be readily accessible to incinerator operators.

(4) The owner or operator of the incinerator shall notify the department, in writing, thirty (30) days after the operation and maintenance plan is initially developed pursuant to this section.

(d) The owner or operator of the incinerator must make the manufacturer's specification or the operation and maintenance plan available to the department upon request.

326 IAC 6.5 PM Limitations Except Lake County
As discussed in the State Rule Applicability - Entire Source, this source is subject to the requirements of 326 IAC 6.5. The four (4) sewage sludge incineration units (I1 through I4) are specifically listed in 326 IAC 6.5-6-35. Pursuant to 326 IAC 6.5-6-35, particulate matter (PM) emissions from the four (4) sewage sludge incineration units (I1 through I4), shall not exceed 72.5 tons per year and 0.030 grains per dry standard cubic foot (dscf).
326 IAC 7-1.1 Sulfur Dioxide Emission Limitations
The sewage sludge incinerators are subject to 326 IAC 7-1.1 because each incinerator has a potential to emit sulfur dioxide (SO2) equal to or greater than 25 tons per year or 10 pounds per hour. Furthermore, the four (4) sewage sludge incineration units (I1 through I4) are specifically listed in 326 IAC 7-4-2.1(a)(2). Pursuant to 326 IAC 7-4-2.1(a)(2), sulfur dioxide (SO2) emissions from the four (4) sewage sludge incineration units (I1 through I4) shall comply with the SO2 limit in 40 CFR 60, Subpart LLLL. Pursuant to 40 CFR 60, Subpart LLLL, the four (4) sewage sludge incineration units shall not exceed 26 parts per million by dry volume for SO2.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The four (4) sewage sludge incineration units (I1 through I4) are not subject to the requirements of 326 IAC 8-1-6 because they were constructed before January 1, 1980.

326 IAC 9-1 (Carbon Monoxide Emission Limits)
The requirements of 326 IAC 9-1 do not apply to the four (4) sewage sludge incineration units (I1 through I4), because although this source does operate a refuse incineration and refuse burning equipment, the units were constructed prior to March 21, 1972. Furthermore, under 326 IAC 9-1-1(b)(1), the four (4) sewage sludge incinerators are exempt from the requirements of 326 IAC 9-1-2, since they are subject to 40 CFR 60, Subpart LLLL.

326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories)
The requirements of 326 IAC 10-3 do not apply to the four (4) sewage sludge incineration units (I1 through I4), since these units are not a blast furnace gas-fired boiler, a Portland cement kiln, or a facility specifically listed under 326 IAC 10-3-1(a)(2). Furthermore, the emission units are not located in Clark or Floyd Counties.

326 IAC 11-6 (Hospital/Medical/Infectious Waste Incinerators)
The requirements of 326 IAC 11-6 do not apply to the four (4) sewage sludge incineration units (I1 through I4), since the incinerators do not combust hospital, medical, or infectious waste.

326 IAC 11-7 (Emission Limitations for Municipal Waste Incinerators)
The requirements of 326 IAC 11-7 do not apply to the four (4) sewage sludge incineration units (I1 through I4), since the incinerators do not combust municipal waste as defined in 326 IAC 11-7-2. 326 IAC 11-7-2 refers to the definition section in 40 CFR 60, Subpart Cb, Section 60.31b, which in turn refers to Section 60.32b for Municipal waste combustor plant. Under 40 CFR 60.32b(a), the incineration units are not subject to the requirements of 40 CFR 60 Subpart Cb, because they do not meet the definition of municipal waste combustor. Pursuant to the definitions under §60.51(a), "municipal solid waste means household, commercial/retail, and/or institutional waste. Household waste includes material discarded by single and multiple residential dwellings, hotels, motels, and other similar permanent or temporary housing establishments or facilities. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, nonmanufacturing activities at industrial facilities, and other similar establishments or facilities. Institutional waste includes material discarded by schools, nonmedical waste discarded by hospitals, material discarded by nonmanufacturing activities at prisons and government facilities, and material discarded by other similar establishments or facilities. Household, commercial/retail, and institutional waste does not include used oil; sewage sludge; wood pallets; construction, renovation, and demolition wastes (which includes but is not limited to railroad ties and telephone poles); clean wood; industrial process or manufacturing wastes; medical waste; or motor vehicles (including motor vehicle parts or vehicle fluff). Household, commercial/retail, and institutional wastes include:

(1) Yard waste;

(2) Refuse-derived fuel; and

(3) Motor vehicle maintenance materials limited to vehicle batteries and tires except as specified in §60.50a(c)."
The incinerators combust sewage sludge not waste that is described above.

326 IAC 11-8 (Commercial and Industrial Solid Waste Incineration Units)
The requirements of 326 IAC 11-8 do not apply to the four (4) sewage sludge incineration units (I1 through I4). The incinerators are not CISWI units as defined in 40 CFR 60.2875, Subpart DDDD. "Commercial and industrial solid waste incineration (CISWI) unit means any distinct operating unit of any commercial or industrial facility that combusts, or has combusted in the preceding 6 months, any solid waste as that term is defined in 40 CFR part 241. If the operating unit burns materials other than traditional fuels as defined in §241.2 that have been discarded, and you do not keep and produce records as required by §60.2740(u), the operating unit is a CISWI unit. While not all CISWI units will include all of the following components, a CISWI unit includes, but is not limited to, the solid waste feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The CISWI unit does not include air pollution control equipment or the stack. The CISWI unit boundary starts at the solid waste hopper (if applicable) and extends through two areas: The combustion unit flue gas system, which ends immediately after the last combustion chamber or after the waste heat recovery equipment, if any; and the combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. The CISWI unit includes all ash handling systems connected to the bottom ash handling system."

326 IAC 11-9 (Other Solid Waste Incineration Units)
The requirements of 326 IAC 11-9 do not apply to the four (4) sewage sludge incineration units (I1 through I4). The incinerators are not OSWI units as defined in 40 CFR 60.3078 Subpart FFFF "other solid waste incineration (OSWI) unit means either a very small municipal waste combustion unit or an institutional waste incineration unit, as defined in this subpart.

Unit types listed in §60.2993 as being excluded from the subpart are not OSWI units subject to this subpart. While not all OSWI units will include all of the following components, an OSWI unit includes, but is not limited to, the municipal or institutional solid waste feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The OSWI unit does not include air pollution control equipment or the stack. The OSWI unit boundary starts at the municipal or institutional waste hopper (if applicable) and extends through two areas:
(1) The combustion unit flue gas system, which ends immediately after the last combustion chamber or after the waste heat recovery equipment, if any; and
(2) The combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. The OSWI unit includes all ash handling systems connected to the bottom ash handling system.

The incinerators are not municipal waste combustion units and are therefore not very small municipal waste combustion units as defined by this definition.

326 IAC 11-10 (Sewage Sludge Incineration Units)
The requirements of 326 IAC 11-10 no longer apply to the four (4) sewage sludge incineration units (I1 through I4), since the incinerators have made changes that meet the definition of modification and the incineration units are now subject to the requirements of 40 CFR 60, Subpart LLLL, per 326 IAC 11-10-1(c). The requirements of 326 IAC 11-10 have been removed from the permit.

Boilers (B2, B3, and the insignificant boilers) and Natural gas-fired units (space heater, etc.)

326 IAC 6.5 PM Limitations Except Lake County
As discussed in the State Rule Applicability - Entire Source, the boilers and the natural gas fired units are not subject to the requirements of 326 IAC 6.5, since the remainder of the facility has potential particulate emissions less than ten (10) tons per year.

326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-1(d), indirect heating facilities which received permit to construct after September 21, 1983 are subject to the requirements of 326 IAC 6-2-4.
The particulate matter emissions (Pt) shall be limited by the following equation:

\[ Pt = \frac{1.09}{Q^{0.26}} \]

Where:

- \( Pt \) = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu).
- \( Q \) = Total source maximum operating capacity rating in MMBtu/hr heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility’s permit application, except when some lower capacity is contained in the facility’s operation permit; in which case, the capacity specified in the operation.

<table>
<thead>
<tr>
<th>Facility</th>
<th>Construction Date (Removal Date)</th>
<th>Operating Capacity (MMBtu/hr)</th>
<th>Calculated Pt (lb/MMBtu)</th>
<th>Particulate Limitation, (Pt) (lb/MMBtu)</th>
<th>PM PTE based on AP-42 (lb/MMBtu)</th>
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<td>B2, B3</td>
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<td>25.2</td>
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<td>B1a through B1e</td>
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<td>10.0</td>
<td>0.39</td>
<td>0.39</td>
<td>0.002</td>
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</tbody>
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Where: \( Q = \) Includes the capacity (MMBtu/hr) of the new unit(s) and the capacities for those unit(s) which were in operation at the source at the time the new unit(s) was constructed.

The twenty-four (24) natural gas fired space heaters are not subject to the requirements of 326 IAC 6-2-1, since they are direct fired heaters.

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 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, the boilers and the natural gas-fired 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.

326 IAC 9-1 (Carbon Monoxide Emission Limits)
The requirements of 326 IAC 9-1 do not apply to the boilers and the natural gas-fired 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.

326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories)
The requirements of 326 IAC 10-3 do not apply to the boilers and the natural gas-fired units, since this unit they are not a blast furnace gas-fired boiler, a Portland cement kiln, or a facility specifically listed under 326 IAC 10-3-1(a)(2).
Storage Tanks

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Even though, the storage tanks 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 8-4-3 (Petroleum Sources; Petroleum Liquid Storage Facilities)
Pursuant to 326 IAC 8-4-1(c) and 326 IAC 8-4-3(a), the requirements of 326 IAC 8-4-3 are not applicable to the storage tanks. The storage tanks have a capacity less than 39,000 gallons.

326 IAC 8-4-4 (Petroleum Sources: Bulk Gasoline Terminals)
The requirements of 326 IAC 8-4-4 do not apply to the storage tanks, since this facility is not a bulk gasoline terminal.

326 IAC 8-4-6 (Petroleum Sources: Gasoline Dispensing Facilities)
The requirements of 326 IAC 8-4-6 do not apply to the gasoline storage tank, since the gasoline storage tank has a monthly gasoline throughput of less than ten thousand (10,000) gallons per month.

326 IAC 8-9 (VOC Rules; Volatile Organic Liquid Storage Vessels)
The requirements of 326 IAC 8-9 do not apply to the storage tanks, since the storage tanks are not located in Lake, Porter, Clark, or Floyd County.

Emergency Generators (Generator-1 and Generator-8)

326 IAC 6.5 PM Limitations Except Lake County
As discussed in the State Rule Applicability - Entire Source, the emergency generators are not subject to the requirements of 326 IAC 6.5, since the remainder of the facility has potential particulate emissions less than ten (10) tons per year.

326 IAC 6-2-1 (Particulate Emission Limitations for Sources of Indirect Heating)
The requirements of 326 IAC 6-2 are not applicable to the emergency generators, since pursuant to 326 IAC 1-2-19, this emission unit does not meet the definition of an indirect heating unit.

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, the emergency 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 emergency generators, because this source does not operate a catalyst regeneration petroleum cracking system or a petroleum fluid coker, grey iron cupola, blast furnace, basic oxygen steel furnace, or other ferrous metal smelting equipment.

326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories)
The requirements of 326 IAC 10-3 do not apply to the emergency generators, since these units are not a blast furnace gas-fired boiler, a Portland cement kiln, or a facility specifically listed under 326 IAC 10-3-1(a)(2).

Degreasing Operation
326 IAC 8-3 Organic Solvent Degreasing Operations
Pursuant to 326 IAC 8-3-1(a), the degreaser is subject to the requirements under 326 IAC 8-3-2(a) and (b), because it is a degreaser that contains one (1) or more volatile organic compounds (VOC) that have a VOC by weight that is equal to or greater than 1 percent (%) and is not subject to 40 CFR 63, Subpart T (incorporated by reference under 326 IAC 20-6-1). The degreaser is also subject to the requirements under 326 IAC 8-3-8, because the degreaser is not cleaning electronic components, is not required to comply with 40 CFR 63, Subpart GG (incorporated by reference under 326 IAC 20-15-1) and is not located in Clark, Floyd, Lake, or Porter County (located in Marion County).

Grinding and Machining

326 IAC 6.5 PM Limitations Except Lake County
As discussed in the State Rule Applicability - Entire Source, the grinding and machining are not subject to the requirements of 326 IAC 6.5, since the remainder of the facility has potential particulate emissions less than ten (10) tons per year.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(13), the grinding and machining is not subject to the requirements of 326 IAC 6-3, since this is a trivial activity as defined in 326 IAC 2-7-1(42)(H)(vi) and (vii).

Compliance Determination and Monitoring Requirements
Permits issued under 326 IAC 2-7 are required to assure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source’s failure to take the appropriate corrective actions within a specific time period.

(a) The Compliance Determination Requirements applicable to this source are as follows:

Testing Requirements:
## Summary of Testing Requirements

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Control Device</th>
<th>Timeframe for Testing or Date of Initial Valid Demonstration</th>
<th>Pollutant/Parameter</th>
<th>Frequency of Testing</th>
<th>Authority</th>
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<tr>
<td>Incinerators I1 through I4</td>
<td>Venturi and Tray Impingement Scrubber</td>
<td>February 2018</td>
<td>PM, SO2</td>
<td>3 Years</td>
<td>40 CFR 60, Subpart LLLL 326 IAC 2-1.1-11</td>
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<td>Beryllium</td>
<td>3 Years</td>
<td>40 CFR 61 Subpart C 326 IAC 2-1.1-11</td>
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<td></td>
<td></td>
<td>February 2018</td>
<td>Mercury</td>
<td>3 Years</td>
<td>40 CFR 61 Subpart E 326 IAC 2-1.1-11</td>
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<td>Exit Gas</td>
<td></td>
<td>February 2018</td>
<td>PM, HCl, CO, Dioxins/Furans, Mercury, NOx, SO2, Cadmium, Lead</td>
<td>3 years*</td>
<td>40 CFR 60, Subpart LLLL 326 IAC 2-1.1-11</td>
</tr>
<tr>
<td></td>
<td>WESP and Venturi Wet Scrubber</td>
<td>Next Scheduled Incinerator Test</td>
<td>Phosphorus</td>
<td>3 years</td>
<td>326 IAC 2-1.1-11</td>
</tr>
</tbody>
</table>

* Timeframe and frequency for testing pursuant to 40 CFR 60.4885(a)(3)(ii) (NSPS Subpart LLLL).

1. Testing of the remainder of the emission units for any pollutant is not required because the control devices are not required to comply with any applicable requirements.

### Continuous Emissions Monitoring System (CEMS) Requirements:

<table>
<thead>
<tr>
<th>Control</th>
<th>Type of Continuous Monitor (Pollutant Monitored)</th>
<th>Applicable Rule or Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regenerative Thermal Oxidizer (RTO)</td>
<td>CEMS (CO)</td>
<td>40 CFR 60 Subpart LLLL</td>
</tr>
</tbody>
</table>

(b) The Compliance Monitoring Requirements applicable to this source are as follows:

<table>
<thead>
<tr>
<th>Control Device</th>
<th>Type of Parametric Monitoring</th>
<th>Frequency</th>
<th>Range or Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wet Electrostatic Precipitator (WESP)</td>
<td>Secondary Amperage</td>
<td>Continuous</td>
<td>Minimum power input to the electrostatic precipitator collection plates, as established value from most recent stack test results</td>
</tr>
<tr>
<td></td>
<td>Secondary Voltage</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minimum effluent water flow rate</td>
<td>Hourly</td>
<td>Minimum effluent water flow rate at the outlet of the electrostatic precipitator</td>
</tr>
<tr>
<td>Carbon Adsorber</td>
<td>Pressure Drop</td>
<td>Daily</td>
<td>Within the normal range established in the most recent compliant stack test</td>
</tr>
<tr>
<td>Scrubber</td>
<td>Scrubber fluid flow rate monitoring</td>
<td>Daily</td>
<td>At or above the value established in the most recent compliant stack test</td>
</tr>
<tr>
<td>Control Device</td>
<td>Type of Parametric Monitoring</td>
<td>Frequency</td>
<td>Range or Specification</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------------</td>
<td>-----------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Pressure Drop</td>
<td>Daily</td>
<td></td>
<td>Within normal range of the upper or lower value established in the most recent compliant stack test.</td>
</tr>
<tr>
<td>pH</td>
<td>Daily</td>
<td></td>
<td>Within normal range of the upper or lower value established in the most recent compliant stack test.</td>
</tr>
<tr>
<td>RTO</td>
<td>3-hour average oxidizer temperature monitoring</td>
<td>Continuous</td>
<td>At or above the value established in the most recent compliant stack test.</td>
</tr>
</tbody>
</table>

These monitoring conditions are necessary because the WESP for the four (4) incinerators (I1 through I4) must operate properly to assure compliance with 40 CFR 60, Subpart LLLL.

These monitoring conditions are necessary because the carbon adsorber for the four (4) incinerators (I1 through I4) must operate properly to assure compliance with 40 CFR 60, Subpart LLLL and 326 IAC 2-2 (PSD) for incinerator I2.

These monitoring conditions are necessary because the venturi scrubber for the four (4) incinerators (I1 through I4) must operate properly to assure compliance with 326 IAC 7-4 (Sulfur dioxide limitations).

These monitoring conditions are necessary because the RTO for the incinerator (I2) must operate properly to assure compliance with 326 IAC 2-2 (PSD).

### 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. IDEM OAQ has removed the CAM language from the permit, since this source is not subject to the provisions of 40 CFR 64, CAM. See CAM applicability section above.

2. IDEM OAQ removed Section D.1 under 097-33066-00032, since the source has undergone changes that meet the definition of a modification under 40 CFR 60.5250 (Subpart MMMM). Section D.1 only applied when the units were subject to Subpart MMMM. Now that these units are subject to Subpart LLLL instead (and no longer subject Subpart MMMM), D.1 has been removed.

3. IDEM OAQ revised the limit under in D.4.1 for 326 IAC 6.5 for the emergency generators, grinding, machining, roads, and natural gas fired combustion units, because these units are not subject to 326 IAC 6.5. See State Rules - Individual Facilities section above.

4. IDEM OAQ separated the limitations for the degreasing operation from D.4 to its own section in D.3.

5. IDEM OAQ updated the limit under 326 IAC 7-4 for the four (4) sewage sludge incinerators. Pursuant to 326 IAC 7-4-2 was repealed and filed September 2, 2015. On January 1, 2017 326 IAC 7-4-2 limitations went into effect.
(6) IDEM OAQ added additional HAP testing under Section D.1.8 for phosphorus, in order to demonstrate compliance with the HAPs limit under D.1.4(b).

(7) IDEM OAQ removed the SO₂ minor emission offset limit. The source is now considered a major source for SO₂ under emission offset (326 IAC 2-3).

## 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 January 14, 2019.

The operation of this stationary municipal treatment plant with sewage sludge incinerators shall be subject to the conditions of the attached proposed Part 70 Operating Permit Renewal No. T097-40933-00032.

The staff recommends to the Commissioner that the Part 70 Operating Permit Renewal be approved.

## IDEM Contact

(a) If you have any questions regarding this permit, please contact Deena Levering, 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) 234-5400 or (800) 451-6027, and ask for Deena Levering or (317) 234-5400.

(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).
Appendix A: Emission Calculations

PTE Summary

Company Name: CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant
Address City IN Zip: 2700 South Belmont Avenue, Indianapolis, Indiana 46221
Permit No./Plt ID: 097-40933-00032
Reviewer: Deena Levering

<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>GHG as CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incinerators (Sludge Incineration)</td>
<td>4.555.20</td>
<td>4.555.20</td>
<td>4.555.20</td>
<td>1,275</td>
<td>228</td>
<td>77.44</td>
<td>1,412</td>
<td>172,766</td>
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<tr>
<td>Incinerators (Natural Gas Usage)</td>
<td>0.73</td>
<td>2.94</td>
<td>2.94</td>
<td>0.23</td>
<td>38.65</td>
<td>2.13</td>
<td>32.46</td>
<td>46567.04</td>
</tr>
<tr>
<td>Incinerator (Worst Case)**</td>
<td>4555.20</td>
<td>4555.20</td>
<td>4555.20</td>
<td>1275.46</td>
<td>227.76</td>
<td>77.44</td>
<td>1412.11</td>
<td>219333.02</td>
</tr>
<tr>
<td>Natural Gas Combustion</td>
<td>0.50</td>
<td>1.99</td>
<td>1.99</td>
<td>0.16</td>
<td>26.23</td>
<td>1.44</td>
<td>22.03</td>
<td>31603.50</td>
</tr>
<tr>
<td>Natural Gas Combustion (new)</td>
<td>0.06</td>
<td>0.25</td>
<td>0.25</td>
<td>0.02</td>
<td>3.24</td>
<td>0.18</td>
<td>2.72</td>
<td>3907.44</td>
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<tr>
<td>Emergency Generators</td>
<td>0.55</td>
<td>0.55</td>
<td>0.55</td>
<td>0.52</td>
<td>7.79</td>
<td>0.63</td>
<td>1.68</td>
<td>289.69</td>
</tr>
<tr>
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<td>-</td>
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<td>-</td>
<td>-</td>
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<tr>
<td>Storage Tanks and Fuel Dispensing</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Total</td>
<td>4,556.31</td>
<td>4,557.99</td>
<td>4,557.99</td>
<td>1,276.15</td>
<td>265.02</td>
<td>82.04</td>
<td>1,438.55</td>
<td>255,133.65</td>
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</table>

* PM2.5 listed as direct PM2.5

<table>
<thead>
<tr>
<th>Fugitive Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.e. Paved Roads</td>
</tr>
<tr>
<td>i.e. Unpaved Roads</td>
</tr>
</tbody>
</table>

* Emissions calculated using emission factors found in AP-42 Chapter 2.2 for Sewage Sludge Incinerators with no control devices

**Since the incinerators utilize direct-fired burners, emissions from natural gas combustion would be emitted with emissions from sludge incineration. Therefore, the worst case emissions are used. Greenhouse gas (GHG) emissions represent the total GHG emissions from both sludge incineration and natural gas combustion.

<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>GHG as CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incinerators (Sludge Incineration)</td>
<td>72.50</td>
<td>4555.20</td>
<td>4555.20</td>
<td>1,275</td>
<td>227.76</td>
<td>77.44</td>
<td>961.78</td>
<td>117689.18</td>
</tr>
<tr>
<td>Incinerators (Natural Gas Usage)</td>
<td>0.73</td>
<td>2.94</td>
<td>2.94</td>
<td>0.23</td>
<td>38.65</td>
<td>2.13</td>
<td>32.46</td>
<td>46567.04</td>
</tr>
<tr>
<td>Incinerator (Worst Case)**</td>
<td>72.50</td>
<td>4555.20</td>
<td>4555.20</td>
<td>1275.46</td>
<td>227.76</td>
<td>77.44</td>
<td>961.78</td>
<td>164236.18</td>
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<tr>
<td>Natural Gas Combustion</td>
<td>0.50</td>
<td>1.99</td>
<td>1.99</td>
<td>0.16</td>
<td>26.23</td>
<td>1.44</td>
<td>22.03</td>
<td>31603.50</td>
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<tr>
<td>Natural Gas Combustion (new)</td>
<td>0.06</td>
<td>0.25</td>
<td>0.25</td>
<td>0.02</td>
<td>3.24</td>
<td>0.18</td>
<td>2.72</td>
<td>3907.44</td>
</tr>
<tr>
<td>Emergency Generators</td>
<td>0.55</td>
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<td>0.52</td>
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<td>0.63</td>
<td>1.68</td>
<td>289.69</td>
</tr>
<tr>
<td>Degreasing Operation</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Storage Tanks and Fuel Dispensing</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
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</tr>
<tr>
<td>Total</td>
<td>73.61</td>
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<td>4557.99</td>
<td>1276.15</td>
<td>265.02</td>
<td>82.04</td>
<td>988.21</td>
<td>200036.80</td>
</tr>
</tbody>
</table>

* PM2.5 listed as direct PM2.5

Note: The shaded cells indicate where limits are included.

**Since the incinerators utilize direct-fired burners, emissions from natural gas combustion would be emitted with emissions from sludge incineration. Therefore, the worst case emissions are used. Greenhouse gas (GHG) emissions represent the total GHG emissions from both sludge incineration and natural gas combustion.
## Appendix A: Emission Calculations

### PTE Summary HAPs

**Company Name:** CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant  
**Address:** 2700 South Belmont Ave., Indianapolis, IN 46221  
**Permit No./Plt ID:** 097-40394-00032  
**Reviewer:** Deena P. Levering

### HAPs

<table>
<thead>
<tr>
<th>HAPs</th>
<th>Incinerators (sludge incineration)</th>
<th>Incinerators (natural gas usage)</th>
<th>NG Combustion</th>
<th>NG Combustion (new)</th>
<th>Emergency Generators</th>
<th>Tanks and Dispensing</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lead</strong></td>
<td>2.56</td>
<td>1.05E-04</td>
<td>1.31E-04</td>
<td>1.62E-05</td>
<td>-</td>
<td>-</td>
<td>4.56</td>
</tr>
<tr>
<td><strong>HCl</strong></td>
<td>0.91</td>
<td>-</td>
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<td>-</td>
<td>-</td>
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<td>0.91</td>
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<tr>
<td><strong>2,3,7,8 TCDD</strong></td>
<td>1.82E-07</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>1.82E-07</td>
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<td><strong>2,3,7,8 TCDF</strong></td>
<td>5.47E-05</td>
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<td>5.47E-05</td>
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<tr>
<td><strong>Total TCDF</strong></td>
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<td>-</td>
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<td>-</td>
<td>-</td>
<td>1.55E-04</td>
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<tr>
<td><strong>Total PCDF</strong></td>
<td>9.11E-05</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9.11E-05</td>
</tr>
<tr>
<td><strong>Total HxCDF</strong></td>
<td>9.11E-05</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9.11E-05</td>
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<tr>
<td><strong>Total OCDF</strong></td>
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<td>4.37E-05</td>
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<tr>
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<td>-</td>
<td>5.92E-07</td>
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<tr>
<td><strong>1,1,1 Trichloroethane</strong></td>
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<td>-</td>
<td>-</td>
<td>0.01</td>
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<tr>
<td><strong>1,1 Dichloroethane</strong></td>
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<td><strong>1,2 Dichloroethane</strong></td>
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<tr>
<td><strong>1,4 Dichloroethane</strong></td>
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<td><strong>Acetaldehyde</strong></td>
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<td><strong>Acetonitrile</strong></td>
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<tr>
<td><strong>Acrylonitrile</strong></td>
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<td>-</td>
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</tr>
<tr>
<td><strong>Benzene</strong></td>
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<td><strong>bui2-ethylhexylphthalate</strong></td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.09</td>
</tr>
<tr>
<td><strong>Carbon Tetrachloride</strong></td>
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<td>9.11E-04</td>
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<td>2.73E-03</td>
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<td><strong>Ethylbenzene</strong></td>
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<td>-</td>
<td>0.07</td>
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<td><strong>Formaldehyde</strong></td>
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<td>0.002</td>
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<td><strong>Methyl Ethyl Ketone</strong></td>
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<td>9.11E-04</td>
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<td><strong>Perchloroethylene</strong></td>
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<tr>
<td><strong>Toluene</strong></td>
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<tr>
<td><strong>Trichloroethene</strong></td>
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<td>0.04</td>
</tr>
<tr>
<td><strong>Vinyl Chloride</strong></td>
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<td>0.59</td>
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<tr>
<td><strong>Total Xylenes</strong></td>
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**Combined Total HAPs =** 59.99  
**Worst Single HAP =** 34.62
## Limited Potential to Emit HAPs (ton/yr)

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Combined Total HAPs = 24.90

Worst Single HAP = 9.93
## Appendix A: Emissions Calculations
### Modification Emission Summary

**Company Name:** CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant  
**Address City IN Zip:** 2700 South Belmont Ave., Indianapolis, IN 46221  
**Permit No./Pit ID:** 097-40394-00032  
**Reviewer:** Deena P. Levering

### Unlimited/Uncontrolled Potential Emissions of the Modification

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<th>NOₓ</th>
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<th>CO</th>
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### Emission Calculations

#### Multiple Hearth Incinerators #1-4

**Company Name:** CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant  
**Address:** 2700 South Belmont Ave., Indianapolis, IN 46221  
**Permit No./Pit ID:** 097-40394-00032  
**Reviewer:** Deena P. Levering

#### Emission Unit

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**Totals:** 10.4 91,104

#### Emission Factor**

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#### Hazardous Air Pollutants (HAPs)

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<th>Incinerator I4 (tons/yr)</th>
<th>Total (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>1.0E+01</td>
<td>1.14</td>
<td>1.14</td>
<td>1.14</td>
<td>4.56</td>
</tr>
<tr>
<td>HCl</td>
<td>2.0E+02</td>
<td>0.23</td>
<td>0.23</td>
<td>0.23</td>
<td>0.91</td>
</tr>
<tr>
<td>2,3,7,8 TCDD</td>
<td>4.0E+03</td>
<td>4.56E+08</td>
<td>4.56E+08</td>
<td>4.56E+08</td>
<td>1.82E+07</td>
</tr>
<tr>
<td>2,3,7,8 TCDF</td>
<td>1.2E+04</td>
<td>1.37E+05</td>
<td>1.37E+05</td>
<td>1.37E+05</td>
<td>5.47E+05</td>
</tr>
<tr>
<td>Total TCDN</td>
<td>3.4E+06</td>
<td>3.87E+05</td>
<td>3.87E+05</td>
<td>3.87E+05</td>
<td>1.55E+04</td>
</tr>
<tr>
<td>Total PCDF</td>
<td>2.0E+06</td>
<td>2.28E+05</td>
<td>2.28E+05</td>
<td>2.28E+05</td>
<td>9.11E+05</td>
</tr>
<tr>
<td>Total HxDCF</td>
<td>2.0E-07</td>
<td>2.28E-06</td>
<td>2.28E-06</td>
<td>2.28E-06</td>
<td>9.11E-06</td>
</tr>
<tr>
<td>Total OCDF</td>
<td>3.4E-09</td>
<td>3.87E-08</td>
<td>3.87E-08</td>
<td>3.87E-08</td>
<td>1.82E-07</td>
</tr>
</tbody>
</table>

**Methodology**

*Maximum Throughput (dry tons/yr) = Incinerators I1 through I4 max throughputs (dry tons/yr) * 8,760 hrs/yr

**Emission factors are from AP 42 (5th Edition 1/95) Table 2.2-1-5, for multiple hearth sewage sludge incinerators.

Emissions (tons/yr) = Emission Factor (lbs of pollutant/dry ton of sludge incinerated) * Limited Throughput (dry tons/yr) / 2000 (lbs/ton)
### Greenhouse Gas Calculations:

#### Natural Gas Combustion

<table>
<thead>
<tr>
<th>Heat Input Capacity (MMBtu/hr)</th>
<th>Potential Throughput (MMCF/yr)</th>
<th>Emission Units:</th>
</tr>
</thead>
<tbody>
<tr>
<td>90.0</td>
<td>772.9</td>
<td>Four (4) multiple sludge incinerators &amp; 22.5 MMBtu/hr each (ID:I1 to I4)</td>
</tr>
</tbody>
</table>

**Greenhouse Gas**

<table>
<thead>
<tr>
<th></th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>120,000</td>
<td>2.3</td>
<td>2.2</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>46,376</td>
<td>0.89</td>
<td>0.85</td>
</tr>
</tbody>
</table>

Summed Potential Emissions in tons/yr: 46,378

**CO2e Total in tons/yr:** 46,567

#### Sludge Incineration

<table>
<thead>
<tr>
<th></th>
<th>CO2*</th>
<th>CH4**</th>
<th>N2O*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/dry ton combusted</td>
<td>3,805</td>
<td>6.4</td>
<td>0.14</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>164,215</td>
<td>291.5</td>
<td>6.4</td>
</tr>
</tbody>
</table>

Summed Potential Emissions in tons/yr: 164,513

**CO2e Total in tons/yr:** 172,766

#### Totals (Natural Gas Combustion and Sludge Incineration)

<table>
<thead>
<tr>
<th></th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>15.5 MMBtu/dry ton of sludge combusted</td>
<td>105.51*** kg CO2/MMBtu</td>
<td></td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>210,591</td>
<td>292</td>
<td>7.2</td>
</tr>
</tbody>
</table>

Summed Potential Emissions in tons/yr: 210,891

**CO2e Total in tons/yr:** 219,333

### Methodology

**Natural Gas Combustion**

- The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
- Emission Factors are from AP 42, Table 1-4.1 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
- Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
- Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF/2,000 lb/ton)
- CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

**Sludge Incineration**

- Emission factors for CO2 and N2O were calculated using 15.5 MMBtu/dry ton of sludge combusted and 105.51*** kg CO2/MMBtu.
- **Emission factor for CH4 are from AP 42 (5th Edition 1/96) Table 2.2-1-5, for multiple hearth sewage sludge incinerators.**


**Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF/2,000 lb/ton)**

**CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (198).**
## Appendix A: Emission Calculations
### Multiple Hearth Incinerators #1-4
#### Limited PTE

**Company Name:** CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant  
**Address City IN Zip:** 2700 South Belmont Ave., Indianapolis, IN 46221  
**Permit No./Plt ID:** 097-40394-00032  
**Reviewer:** Deena P. Levering

<table>
<thead>
<tr>
<th>Limited Throughput*</th>
<th>62,050 (dry tons/yr)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Criteria Pollutants</th>
<th>Emission Factor or Limit (lbs/ton)</th>
<th>Incinerators I1 through I4 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>72.5</td>
<td>326 IAC 6.5-6-35 Limit</td>
</tr>
<tr>
<td>PM</td>
<td>1.3</td>
<td>326 IAC 2-3 Limit</td>
</tr>
<tr>
<td>CO**</td>
<td>31.0</td>
<td>961.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Air Pollutants (HAPs)</th>
<th>Emission Factor or Limit (lbs/ton)</th>
<th>Incinerators I1 through I4 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorus</td>
<td>0.32</td>
<td>9.93</td>
</tr>
<tr>
<td>Combined HAPs</td>
<td>0.76</td>
<td>23.58</td>
</tr>
</tbody>
</table>

**Methodology**

*Limited throughput is based on emissions limits located in Permit No. T097-33066-00032  
**Emission factors are from AP 42 (5th Edition 1/95) Table 2.2-1-5, for uncontrolled multiple hearth sewage sludge incinerators.  
Emissions (tons/yr) = Emission Factor (lbs of pollutant/dry ton of sludge incinerated) * Limited Throughput (dry tons/yr) / 2000 (lbs/ton)
Appendix A: Emission Calculations
Multiple Hearth Incinerators #1-4
Limited PTE

Company Name: CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant
Address City IN Zip: 2700 South Belmont Ave., Indianapolis, IN 46221
Permit No./Plt ID: 097-40394-00032
Reviewer: Deena P. Levering

Greenhouse Gas Calculations:

**Natural Gas Combustion**

<table>
<thead>
<tr>
<th>Heat Input Capacity (MMBtu/hr)</th>
<th>Potential Throughput (MMCF/yr)</th>
<th>Emission Units: Four (4) multiple hearth sludge incinerators @ 22.5 MMBtu/hr each (ID:I1 to I4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>90.0</td>
<td>772.9</td>
<td>46,378</td>
</tr>
</tbody>
</table>

Greenhouse Gas

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMcf</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas Combustion</td>
<td>120,000</td>
<td>2.3</td>
<td>2.2</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>46,376</td>
<td>0.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Summed Potential Emissions in tons/yr</td>
<td>46,378</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO2e Total in tons/yr</td>
<td>46,567</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sludge Incineration**

<table>
<thead>
<tr>
<th>Emission Factor in lb/dry ton combusted</th>
<th>CO2*</th>
<th>CH4**</th>
<th>N2O*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sludge Incineration</td>
<td>111,845</td>
<td>199</td>
<td>4.3</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summed Potential Emissions in tons/yr</td>
<td>112,048</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO2e Total in tons/yr</td>
<td>117,669</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Totals (Natural Gas Combustion and Sludge Incineration)**

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMcf</th>
<th>CO2*</th>
<th>CH4**</th>
<th>N2O*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential Emission in tons/yr</td>
<td>158,222</td>
<td>199</td>
<td>5.2</td>
</tr>
<tr>
<td>Summed Potential Emissions in tons/yr</td>
<td>158,426</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO2e Total in tons/yr</td>
<td>164,236</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Methodology**

**Natural Gas Combustion**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64. Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03. Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A. CO2e (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF) x CO2 GWP (310).

**Sludge Incineration**

*Emission factors for CO2 and N2O were calculated using 15.5 MMBtu/dry ton of sludge combusted and 105.51*** kg CO2/MMBtu.

The following calculations illustrate that the source can meet the limitations under 40 CFR 60, Subpart LLLL (New Sludge Incineration Units) and 326 IAC 6.5-6-35 (Particulate Matter Limitations) after the add-on controls.

**Emission Calculations**

### Criteria Pollutants

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor Used (AP-42 Emission Factor Rating)</th>
<th>Control Efficiency** (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>Controlled by venturi/impingement/wet ESP (E Rating)</td>
<td>- 274.54 961.8</td>
</tr>
<tr>
<td>SO2</td>
<td>Controlled by venturi/impingement (E Rating)</td>
<td>98% 0.3 1.0</td>
</tr>
<tr>
<td>NOx</td>
<td>Uncontrolled (C Rating)</td>
<td>0.40 - 3.5 12.41</td>
</tr>
<tr>
<td>VOC</td>
<td>Controlled by impingement (E Rating)</td>
<td>98% 24.8E-03 2.48E-03</td>
</tr>
<tr>
<td>CO</td>
<td>Controlled by impingement (E Rating)</td>
<td>98% 24.8E-03 2.48E-03</td>
</tr>
</tbody>
</table>

### Hazardous Air Pollutants (HAPs)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor Used (AP-42 Emission Factor Rating)</th>
<th>Control Efficiency** (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>Controlled by venturi/impingement (A Rating)</td>
<td>0.53 1.86</td>
</tr>
<tr>
<td>HCl</td>
<td>Controlled by venturi/impingement (E Rating)</td>
<td>- 274.54 961.8</td>
</tr>
<tr>
<td>HOC</td>
<td>Controlled by venturi/impingement (E Rating)</td>
<td>- 274.54 961.8</td>
</tr>
<tr>
<td>2,3,7,8 TCE</td>
<td>Controlled by venturi/impingement/wet ESP (E Rating)</td>
<td>98% 8.15E-05 2.85E-05</td>
</tr>
<tr>
<td>Total TCE</td>
<td>Controlled by venturi/impingement (E Rating)</td>
<td>98% 8.15E-05 2.85E-05</td>
</tr>
<tr>
<td>Total PCDF</td>
<td>Controlled by venturi/impingement (E Rating)</td>
<td>- 274.54 961.8</td>
</tr>
<tr>
<td>Total HoCDF</td>
<td>Controlled by venturi/impingement (E Rating)</td>
<td>- 274.54 961.8</td>
</tr>
<tr>
<td>Total OCF</td>
<td>Controlled by venturi/impingement (E Rating)</td>
<td>- 274.54 961.8</td>
</tr>
</tbody>
</table>

**VOC and organic HAPs that did not have an AP-42 emission factor that accounted for an RTO (afterburner) unit have been calculated using a standard control efficiency of 98%**

### Total Emission Calculations

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor Used (AP-42 Emission Factor Rating)</th>
<th>Control Efficiency** (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incinerator I2</td>
<td>Controlled by venturi/impingement (E Rating)</td>
<td>- 274.54 961.8</td>
</tr>
<tr>
<td>Incinerators 11, 13, and 14</td>
<td>Controlled by venturi/impingement (E Rating)</td>
<td>- 274.54 961.8</td>
</tr>
</tbody>
</table>

Methodology

*Emission factors are from AP 42 (5th Edition 1/95) Table 2.2-1-5, for multiple hearth sewage sludge incinerators using the lowest emission factor listed for either Electrostatic Precipitators, Venturi Scrubbers, and/or Regenerative Thermal Oxidizers (afterburners).*

**VOC and organic HAPs that did not have an AP-42 emission factor that accounted for an RTO (afterburner) unit have been calculated using a standard control efficiency of 98%**

Pursuant to Significant Source Modification No. 097-16971-00032 Incinerator I2 is limited to a throughput of less than 17,712 tons of dry sludge per consecutive 12 month period.

The total amount of sewage sludge delivered to all incinerators is limited to 62,050 pursuant to the emission offset limit in an operating permit issued by the city of Indianapolis on 8/21/90. Emissions (tons/yr) = Emission Factor (lbs of pollutant/dry ton of sludge incinerated) * Limited Throughput (dry tons/yr) / 2000 (lbs/ton)
Appendix A: Emission Calculations
Multiple Hearth Incinerators #1-4
Limited and Controlled PTE (Prior to addition of control devices approved in 2013)

Company Name: CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant
Address City IN Zip: 2700 South Belmont Ave., Indianapolis, IN 46221
Permit No./Plt ID: 097-40394-00032
Reviewer: Deena P. Levering

Greenhouse Gas Calculations:

Natural Gas Combustion

<table>
<thead>
<tr>
<th></th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat Input Capacity MMBtu/hr</td>
<td>90.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential Throughput MMCF/yr</td>
<td>712.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Emission Units:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four (4) multiple hearth sludge incinerators @ 22.5 MMBtu/hr each (ID:I1 to I4)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Natural Gas Combustion</th>
<th>Sludge Incineration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CO2</td>
<td>CH4</td>
</tr>
<tr>
<td>Emission Factor in lb/MMcf</td>
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<td>2.3</td>
</tr>
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<td>Potential Emission in tons/yr</td>
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<td>0.9</td>
</tr>
<tr>
<td>Summed Potential Emissions in tons/yr</td>
<td>46,378</td>
<td>112,048</td>
</tr>
<tr>
<td>CO2e Total in tons/yr</td>
<td>46,667</td>
<td>117,669</td>
</tr>
</tbody>
</table>

Sludge Incineration

<table>
<thead>
<tr>
<th></th>
<th>Greenhouse Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CO2</td>
</tr>
<tr>
<td>Emission Factor in lb/dry ton combusted</td>
<td>3,005</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>111.845</td>
</tr>
<tr>
<td>Summed Potential Emissions in tons/yr</td>
<td>112,048</td>
</tr>
<tr>
<td>CO2e Total in tons/yr</td>
<td>117,669</td>
</tr>
</tbody>
</table>

Totals (Natural Gas Combustion and Sludge Incineration)

<table>
<thead>
<tr>
<th></th>
<th>Greenhouse Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential Emission in tons/yr</td>
<td>158,222</td>
</tr>
<tr>
<td>Summed Potential Emissions in tons/yr</td>
<td>158,426</td>
</tr>
<tr>
<td>CO2e Total in tons/yr</td>
<td>164,236</td>
</tr>
</tbody>
</table>

Methodology

Natural Gas Combustion

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4.2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Global Warming Potentials (GWP) from AP 42, Table 2.2-1-5, for multiple hearth sewage sludge incinerators.

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

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Sludge Incineration

*Emission factors for CO2 and N2O were calculated using 15.5 MMBtu/dry ton of sludge combusted and 105.51*** kg CO2/MMBtu.

**Emission factor for CH4 are from AP 42 (5th Edition 1/95) Table 2.2-1-5, for multiple hearth sewage sludge incinerators.


CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (198).
Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Incinerators

Company Name: CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant
Address City IN Zip: 2700 South Belmont Ave., Indianapolis, IN 46221
Permit No./Pit ID: 097-40394-00032
Reviewer: Deena P. Levering

<table>
<thead>
<tr>
<th>Heat Input Capacity</th>
<th>Potential Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td>MM BTU/hr</td>
<td>MMCF/yr</td>
</tr>
<tr>
<td>90.0</td>
<td>772.9</td>
</tr>
</tbody>
</table>

Emission Units:
Four (4) multiple hearth sludge incinerators @ 22.5 MM BTU/hr each (ID:I1 to I4)

<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></td>
<td>PM*</td>
<td>0.73</td>
</tr>
<tr>
<td></td>
<td>PM10*</td>
<td>2.94</td>
</tr>
<tr>
<td></td>
<td>direct PM2.5*</td>
<td>2.94</td>
</tr>
<tr>
<td></td>
<td>SO2</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>NOx</td>
<td>38.6</td>
</tr>
<tr>
<td></td>
<td>VOC</td>
<td>2.13</td>
</tr>
<tr>
<td></td>
<td>CO</td>
<td>32.5</td>
</tr>
<tr>
<td></td>
<td><strong>see below</strong></td>
<td></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.

MM BTU = 1,000,000 BTu
MM CF = 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/yr) = 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

HAPS Calculations

<table>
<thead>
<tr>
<th>HAPs - Organics</th>
<th>Emission Factor in lb/MMCF</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>2.1E-03</td>
<td>8.1E-04</td>
</tr>
<tr>
<td>Dichlorobenzene</td>
<td>1.2E-03</td>
<td>4.6E-04</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>7.5E-02</td>
<td>2.9E-02</td>
</tr>
<tr>
<td>Hexane</td>
<td>1.8E+00</td>
<td>0.70</td>
</tr>
<tr>
<td>Toluene</td>
<td>3.4E-03</td>
<td>1.3E-03</td>
</tr>
<tr>
<td>Total - Organics</td>
<td></td>
<td>0.73</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HAPs - Metals</th>
<th>Emission Factor in lb/MMCF</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>5.0E-04</td>
<td>1.1E-04</td>
</tr>
<tr>
<td>Cadmium</td>
<td>1.2E-03</td>
<td>5.4E-04</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.4E-03</td>
<td>1.5E-04</td>
</tr>
<tr>
<td>Manganese</td>
<td>3.8E-04</td>
<td>8.1E-04</td>
</tr>
<tr>
<td>Nickel</td>
<td>2.1E-03</td>
<td>0.70</td>
</tr>
<tr>
<td>Total Metals</td>
<td></td>
<td>2.1E-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.

Greenhouse Gas Calculations
Greenhouse gas emissions from natural gas combustion in the incinerators are included with the calculations for sewage sludge incineration.
Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/Hr <100

Company Name: CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant
Address City IN Zip: 2700 South Belmont Ave., Indianapolis, IN 46221
Permit No./Plt ID: 097-40394-00032
Reviewer: Deena P. Levering

<table>
<thead>
<tr>
<th>Heat Input Capacity MMBtu/hr</th>
<th>Potential Throughput MMCF/yr</th>
<th>Emission Units:</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.2 MM BTU/HR</td>
<td>216.4 MM CFU/yr</td>
<td>Two (2) boilers @ 12.8 MM Bu/hr each (B2, B3)</td>
</tr>
<tr>
<td>4 MMBtu/hr</td>
<td>34.4 MM CFU/yr</td>
<td>Twenty three (23) building heaters @ 4.0 MM Bu/hr total</td>
</tr>
<tr>
<td>1.00 MM Btu/hr</td>
<td>8.6 MM CFU/yr</td>
<td>Three (3) water heaters @ 1.0 MM Bu/hr total</td>
</tr>
<tr>
<td>7.73 MM Btu/hr</td>
<td>66.4 MM CFU/yr</td>
<td>Eight (8) HVAC make-up air @ 7.73 MM Bu/hr total</td>
</tr>
<tr>
<td>0.35 MM Bu/hr</td>
<td>3.0 MM CFU/yr</td>
<td>One (1) power wash unit @ 0.35 MM Bu/hr</td>
</tr>
<tr>
<td>12.8 MM Btu/hr</td>
<td>108.9 MM CFU/yr</td>
<td>Four (4) Regenerative Thermal Oxidizers @ 3.2 MM Bu/hr each (ID: RTO-1 to RTO-4)</td>
</tr>
<tr>
<td>10 MM Btu/hr</td>
<td>85.9 MM CFU/yr</td>
<td>Five (5) condensing boilers @ 2.8 MM Bu/hr each (ID: B1a to B1e)</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>61.1 524.6</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM*</th>
<th>PM10*</th>
<th>direct PM2.5*</th>
<th>SO2</th>
<th>NOx</th>
<th>CO2</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>0.50</td>
<td>1.99</td>
<td>1.99</td>
<td>0.16</td>
<td>26.2</td>
<td>1.44</td>
<td>22.0</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>0.050</td>
<td>1.99</td>
<td>1.99</td>
<td>0.16</td>
<td>26.2</td>
<td>1.44</td>
<td>22.0</td>
</tr>
</tbody>
</table>

Methodology
All emission factors are based on normal firing.
MMBu = 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 (MMBu/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

**HAPS Calculations**

<table>
<thead>
<tr>
<th>Pollutant</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></td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>5.5E-04</td>
<td>3.1E-04</td>
<td>2.5E-02</td>
<td>0.47</td>
<td>8.9E-04</td>
<td></td>
</tr>
<tr>
<td><strong>Total - Organics</strong></td>
<td>0.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollutant</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>5.5E-04</td>
<td></td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>1.3E-04</td>
<td>2.9E-04</td>
<td>3.7E-04</td>
<td>1.0E-04</td>
<td>5.5E-04</td>
<td></td>
</tr>
<tr>
<td><strong>Total HAPS</strong></td>
<td>0.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Worst HAP</strong></td>
<td>0.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></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.

**Greenhouse Gas Calculations**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>120,000</td>
<td>2.3</td>
<td>2.2</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>31,474</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Summed Potential Emissions in tons/yr</strong></td>
<td>31,475</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CO2e Total in tons/yr</strong></td>
<td>31,603</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Methodology
The CO2 Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).
## Appendix A: Emissions Calculations
### Natural Gas Combustion Only
### MM BTU/HR <100

#### Company Name:
CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant

#### Address City IN Zip:
2700 South Belmont Ave., Indianapolis, IN 46221

#### Permit No./Plt ID:
097-40394-00032

#### Reviewer:
Deena P. Levering

### Heat Input Capacity

<table>
<thead>
<tr>
<th>Heat Input Capacity</th>
<th>Potential Throughput</th>
<th>Emission Units:</th>
</tr>
</thead>
<tbody>
<tr>
<td>MM BTU/hr</td>
<td>MMCF/yr</td>
<td></td>
</tr>
<tr>
<td>1.01</td>
<td>8.7</td>
<td>Two (2) machine room boilers @ 0.505 MM BTU/hr each</td>
</tr>
<tr>
<td>0.1999</td>
<td>1.7</td>
<td>One (1) scum hot water heater @ 0.1999 MM BTU/hr total</td>
</tr>
<tr>
<td>1.10</td>
<td>9.4</td>
<td>Two (2) MAU @ 0.550 MM BTU/hr each (ID: MAU-B2 and MAU-B3)</td>
</tr>
<tr>
<td>0.70</td>
<td>6.0</td>
<td>One (1) MAU @ 0.700 MM BTU/hr (ID: MAU-3)</td>
</tr>
<tr>
<td>0.25</td>
<td>2.1</td>
<td>One (1) space heater @ 0.250 MM BTU/hr</td>
</tr>
<tr>
<td>4.292</td>
<td>36.9</td>
<td>Three (3) MAU @ 4.292 MM BTU/hr total</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>7.6</strong></td>
<td><strong>64.9</strong></td>
</tr>
</tbody>
</table>

### Methodology

All emission factors are based on normal firing.

- MMBtu = 1,000,000 Btu
- MMCF = 1,000,000 Cubic Feet of Gas

### Emission Factors

#### PM*

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMCF</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>0.06</td>
</tr>
<tr>
<td>PM10*</td>
<td>0.25</td>
</tr>
<tr>
<td>direct PM2.5</td>
<td>0.25</td>
</tr>
<tr>
<td>SO2</td>
<td>0.02</td>
</tr>
<tr>
<td>NOx</td>
<td>3.2</td>
</tr>
<tr>
<td>VOC</td>
<td>0.18</td>
</tr>
<tr>
<td>CO</td>
<td>2.7</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

### HAPS Calculations

#### HAPS - Organics

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMcf</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>2.1E-03</td>
</tr>
<tr>
<td>Dichlorobenzene</td>
<td>1.2E-03</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>7.5E-02</td>
</tr>
<tr>
<td>Hexane</td>
<td>1.6E+00</td>
</tr>
<tr>
<td>Toluene</td>
<td>3.4E-03</td>
</tr>
<tr>
<td>Total - Organics</td>
<td>0.06</td>
</tr>
</tbody>
</table>

#### HAPS - Metals

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMcf</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>1.6E-05</td>
</tr>
<tr>
<td>Cadmium</td>
<td>3.8E-05</td>
</tr>
<tr>
<td>Chromium</td>
<td>4.2E-05</td>
</tr>
<tr>
<td>Manganese</td>
<td>1.2E-05</td>
</tr>
<tr>
<td>Nickel</td>
<td>6.8E-05</td>
</tr>
<tr>
<td>Total - Metals</td>
<td>1.8E-04</td>
</tr>
</tbody>
</table>

### Greenhouse Gas Calculations

<table>
<thead>
<tr>
<th>Greenhouse Gas</th>
<th>Emission Factor in lb/MMcf</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2</td>
<td>120,000</td>
<td>2.3</td>
</tr>
<tr>
<td>CH4</td>
<td>3.891</td>
<td>0.1</td>
</tr>
<tr>
<td>N2O</td>
<td>2.2</td>
<td>0.1</td>
</tr>
</tbody>
</table>

| Summed Potential Emissions in tons/yr | 3.892 |
| CO2e Total in tons/yr                | 3.907 |

### Methodology

- The five highest organic and metal HAPS emission factors are provided above.
- Additional HAPS emission factors are available in AP-42, Chapter 1.4.

- HAPS Calculations

### Global Warming Potentials (GWP)

- Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
- **Emission Factors for CO2:**
  - Uncontrolled = 120,000 lb/MMCF
  - Low NOx Burner = 3,250 lb/MMCF
  - Low NOx Burners/Flue gas recirculation = 320 lb/MMCF

- **Emission Factors for CH4:**
  - Uncontrolled = 3.99 lb/MMCF
  - Low NOx Burner = 1.19 lb/MMCF
  - Low NOx Burners/Flue gas recirculation = 0.01 lb/MMCF

- **Emission Factors for N2O:**
  - Uncontrolled = 31.5 lb/MMCF
  - Low NOx Burner = 1.25 lb/MMCF
  - Low NOx Burners/Flue gas recirculation = 0.01 lb/MMCF

- The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low NOx burner is 0.84.
- Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

**Methodology**

**Emission ton/yr** = Throughput (MMCF/hr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**CO2e** Total in tons/yr = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).
Appendix A: Emission Calculations

Reciprocating Internal Combustion Engines - Diesel Fuel

Output Rating (<=600 HP)

Maximum Input Rate (<=4.2 MMBtu/hr)

Company Name: CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant
Address City IN Zip: 2700 South Belmont Ave., Indianapolis, IN 46221
Permit No./Plt ID: 097-40394-00032
Reviewer: Deena P. Levering

Total Output Horsepower Rating (hp) 1005.0
Generator-1: 480 hp
Maximum Hours Operated per Year 500
Potential Throughput (hp-hr/yr) 500,000

<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>0.0022</td>
<td>0.0022</td>
<td>0.0022</td>
<td>0.0021</td>
<td>0.0310</td>
<td>0.0025</td>
<td>0.0087</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>0.55</td>
<td>0.55</td>
<td>0.55</td>
<td>0.52</td>
<td>7.79</td>
<td>0.63</td>
<td>1.68</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>Benzene</th>
<th>Toluene</th>
<th>Xylene</th>
<th>1,3-Butadiene</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>8.53E-06</td>
<td>2.86E-06</td>
<td>2.00E-06</td>
<td>2.74E-07</td>
<td>8.26E-06</td>
<td>5.37E-06</td>
<td>6.48E-07</td>
<td>1.18E-06</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>1.8E-03</td>
<td>7.2E-04</td>
<td>5.0E-04</td>
<td>6.9E-05</td>
<td>2.1E-03</td>
<td>1.3E-03</td>
<td>1.8E-04</td>
<td>3.0E-04</td>
</tr>
</tbody>
</table>

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

Potential Emission of Total HAPs (tons/yr) 6.8E-03

Green House Gas Emissions (GHG)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/hp-hr</td>
<td>1.15E+00</td>
<td>4.63E-05</td>
<td>9.26E-06</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>289</td>
<td>1.2E-02</td>
<td>2.3E-03</td>
</tr>
</tbody>
</table>

Summed Potential Emissions in tons/yr 289
CO2e Total in tons/yr 290

Methodology

Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2
CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
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]
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).
### Appendix A: Emission Calculations

**VOC Emissions**
From Degreasing Operation

**Company Name:** CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant  
**Address City IN Zip:** 2700 South Belmont Ave., Indianapolis, IN 46221  
**Permit No./Pit ID:** 097-40394-00032  
**Reviewer:** Deena P. Levering

<table>
<thead>
<tr>
<th>Degreaser</th>
<th>Usage (gal/year)</th>
<th>Solvent Density (lb/gal)</th>
<th>Percentage VOC</th>
<th>Potential VOC Emissions (lbs/yr)</th>
<th>Potential VOC Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystal Clean Premium 142 Mineral Spirits</td>
<td>145</td>
<td>8.18</td>
<td>100.00%</td>
<td>1,186</td>
<td>0.593</td>
</tr>
</tbody>
</table>

**Methodology**

Potential VOC Emissions (lb/yr) = Usage (gal/yr) * Solvent Density (lb/gal)  
Potential VOC Emissions (tons/yr) = Usage (gal/yr) * Solvent Density (lb/gal) * 1 ton/2000 lbs
Appendix A: Emission Calculations

VOC and HAP Emissions From Fuel Dispensing and Storage

Company Name: CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant
Address City IN Zip: 2700 South Belmont Ave., Indianapolis, IN 46221
Permit No./Plt ID: 097-40394-00032
Reviewer: Deena P. Levering

A. Volatile Organic Compound (VOC) Emissions From Storage Tanks (Working and Breathing Losses)

<table>
<thead>
<tr>
<th>Product Stored</th>
<th>Maximum Liquid Volume (gallons)</th>
<th>Turnovers per year</th>
<th>Product Throughput (gallons/yr)</th>
<th>Working Losses (lbs/yr)</th>
<th>Breathing Losses (lbs/yr)</th>
<th>Total VOC Losses (tons/yr)</th>
<th>VOC Working Losses (tons/yr)</th>
<th>VOC Breathing Losses (tons/yr)</th>
<th>Total VOC Losses (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline (RVP15)</td>
<td>10,000</td>
<td>5.80</td>
<td>58,000</td>
<td>604.37</td>
<td>2,226.95</td>
<td>2,831.33</td>
<td>0.30</td>
<td>1.11</td>
<td>1.42</td>
</tr>
<tr>
<td>Diesel</td>
<td>8,000</td>
<td>3.93</td>
<td>59,000</td>
<td>0.97</td>
<td>2.48</td>
<td>3.45</td>
<td>4.9E-04</td>
<td>1.2E-03</td>
<td>1.7E-03</td>
</tr>
</tbody>
</table>

Totals: 2,834.78

Methodology

Product Throughput (gallons/yr) = Maximum Liquid Volume (gallons) * Turnovers per year
VOC emissions from storage tanks were determined using US EPA TANKS Version 4.0.9d

B. Gasoline Fuel Transfer and Dispensing Operation

Gasoline Throughput = 58 kgal/yr

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Emission Factor (lbs/kgal of throughput)*</th>
<th>PTE of VOC (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Refueling (displaced losses - uncontrolled)</td>
<td>11.00</td>
<td>0.319</td>
</tr>
<tr>
<td>Spillage</td>
<td>0.70</td>
<td>0.0203</td>
</tr>
</tbody>
</table>

Totals 0.3393

Methodology

Gasoline Throughput (kgal/yr) = [Gasoline Throughput (gal/yr)] / [1000 gal/kg]

*Emission Factors from AP-42 Chapter 5.2 Transportation And Marketing Of Petroleum Liquids (dated 6/08), Table 5.2-7

PTE of VOC (tons/yr) = [Gasoline Throughput (kgal/yr)] * [Emission Factor (lbs/kgal)] * [1 ton/1000 lbs]

C. Hazardous Air Pollutant (HAP) Emissions

<table>
<thead>
<tr>
<th>Product Stored</th>
<th>Total PTE of VOC (tons/yr)</th>
<th>PTE of Total HAPs (tons/yr)</th>
<th>PTE of Worst Case Single HAP - Toluene (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline</td>
<td>1.42</td>
<td>0.03</td>
<td>9.1E-03</td>
</tr>
<tr>
<td>Diesel</td>
<td>1.7E-03</td>
<td>1.5E-04</td>
<td>1.0E-04</td>
</tr>
</tbody>
</table>

Totals 0.3393 9.1E-03 Toluene

Methodology

PTE of Total HAPs (tons/yr) = [Total HAP content (% by weight)] * [PTE of VOC (tons/yr)]

PTE of Worse Case Single HAP (tons/yr) = [Worse Case Single HAP Content (% by weight)] * [PTE of VOC (tons/yr)]
### Paved Roads at Industrial Site

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

#### Vehicle Information (provided by source)

<table>
<thead>
<tr>
<th>Type</th>
<th>Maximum number of vehicles per day</th>
<th>Number of one-way trips per day per vehicle</th>
<th>Maximum trips per day (trip/day)</th>
<th>Maximum Weight of Loaded Vehicles (ton/trip)</th>
<th>Total Weight driven per day (ton/day)</th>
<th>Maximum one-way distance (feet/trip)</th>
<th>Maximum one-way distance (miles/trip)</th>
<th>Maximum one-way miles (miles/yr)</th>
<th>Maximum one-way miles (miles/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basin Cleaner (round-trip)</td>
<td>3.6</td>
<td>1.0</td>
<td>3.0</td>
<td>35.0</td>
<td>105.0</td>
<td>0.573</td>
<td>0.362</td>
<td>34.4</td>
<td>34.4</td>
</tr>
<tr>
<td>Tandum Dump Truck (round-trip)</td>
<td>3.0</td>
<td>1.0</td>
<td>3.0</td>
<td>35.0</td>
<td>105.0</td>
<td>0.573</td>
<td>0.362</td>
<td>34.4</td>
<td>34.4</td>
</tr>
<tr>
<td>Septic Haulers (leaving plant, one-way)</td>
<td>10.0</td>
<td>2.0</td>
<td>20.0</td>
<td>14.0</td>
<td>280.0</td>
<td>0.379</td>
<td>7.6</td>
<td>270.2</td>
<td>270.2</td>
</tr>
<tr>
<td>Septic Haulers (entering plant, one-way)</td>
<td>12.0</td>
<td>2.0</td>
<td>20.0</td>
<td>14.0</td>
<td>280.0</td>
<td>0.379</td>
<td>7.6</td>
<td>270.2</td>
<td>270.2</td>
</tr>
<tr>
<td>Vactor Trucks (leaving plant, one-way)</td>
<td>10.0</td>
<td>2.0</td>
<td>20.0</td>
<td>14.0</td>
<td>280.0</td>
<td>0.379</td>
<td>7.6</td>
<td>270.2</td>
<td>270.2</td>
</tr>
<tr>
<td>Vactor Trucks (leaving plant, one-way)</td>
<td>10.0</td>
<td>2.0</td>
<td>20.0</td>
<td>14.0</td>
<td>280.0</td>
<td>0.379</td>
<td>7.6</td>
<td>270.2</td>
<td>270.2</td>
</tr>
<tr>
<td>Triaxle Dump Truck (round-trip)</td>
<td>1.5</td>
<td>4.0</td>
<td>4.0</td>
<td>40.0</td>
<td>160.0</td>
<td>0.236</td>
<td>5.6</td>
<td>19.0</td>
<td>19.0</td>
</tr>
<tr>
<td>Leach Cleaner (round-trip)</td>
<td>1.5</td>
<td>1.0</td>
<td>1.0</td>
<td>40.0</td>
<td>160.0</td>
<td>0.236</td>
<td>5.6</td>
<td>19.0</td>
<td>19.0</td>
</tr>
</tbody>
</table>

#### Methodology

- **Total Weight driven per day (ton/day)** = \[\text{Maximum Weight of Loaded Vehicle (ton/trip)} \times \text{Maximum trips per day (trip/day)}\]
- **Maximum one-way miles (miles/yr)** = \[\text{Maximum one-way miles (miles/trip)} \times \text{Maximum trips per year (trip/day)}\]
- **Average Vehicle Weight Per Trip** = \[\frac{\text{Maximum Weight of Loaded Vehicle (ton/trip)}}{\text{Maximum trips per day (trip/day)}}\]
- **Average Miles Per Trip** = \[\frac{\text{Maximum one-way distance (feet/trip)}}{\text{Maximum trips per day (trip/day)}}\]

#### Abbreviations

- PM = Particulate Matter
- PM2.5 = Particle Matter (<2.5 um)
- PM10 = Particulate Matter (<10 um)
- PTE = Potential to Emit
- VMT = Vehicle Miles Traveled
- TSP = Total Suspended Particles

#### Calculations

1. **Unmitigated Emission Factor**
   \[\text{Ef} = \frac{sL}{k * (W)^{0.91} * (V)^{1.02}}\]

2. **Mitigated Emission Factor**
   \[\text{Eext} = \text{Ef} \times \left[1 - \frac{p}{4N}\right]\]

3. **Dust Control Efficiency**
   \[\text{p} = \frac{1}{2} \times \text{N} \times \left\lfloor \frac{12}{50}\right\rfloor\]

4. **Unmitigated PTE**
   \[\text{Unmitigated PTE} = \text{PTE} \times \text{VMT} \times \text{EF} \times \left(\frac{0.011}{0.0022} \times \frac{0.00054}{0.00009}\right)\]

5. **Mitigated PTE (Before Control)**
   \[\text{Mitigated PTE (Before Control)} = \text{Mitigated PTE (After Control)} \times \text{Ef} \times \left[1 - \frac{p}{4N}\right]\]

6. **Mitigated PTE (After Control)**
   \[\text{Mitigated PTE (After Control)} = \text{Mitigated PTE (Before Control)} \times \text{Eext}\]

#### Appendix A: Emission Calculations

**Fugitive Dust Emissions - Paved Roads**

**Company Name:** CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant

**Address City In Zip:** 2700 South Belmont Ave., Indianapolis, IN 46221

**Permit No./Plt ID:** 097-40394-00032

**Reviewer:** Deena P. Levering

---

### Emission Calculations

<table>
<thead>
<tr>
<th>Process</th>
<th>Mitigated PTE of PM (Before Control) (ton/yr)</th>
<th>Mitigated PTE of PM10 (Before Control) (ton/yr)</th>
<th>Mitigated PTE of PM2.5 (Before Control) (ton/yr)</th>
<th>Mitigated PTE of PM (After Control) (ton/yr)</th>
<th>Mitigated PTE of PM10 (After Control) (ton/yr)</th>
<th>Mitigated PTE of PM2.5 (After Control) (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basin Cleaner (round-trip)</td>
<td>0.64</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Tandum Dump Truck (round-trip)</td>
<td>0.22</td>
<td>0.06</td>
<td>0.01</td>
<td>0.11</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td>Septic Haulers (leaving plant, one-way)</td>
<td>0.17</td>
<td>0.04</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Septic Haulers (entering plant, one-way)</td>
<td>0.04</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vactor Trucks (round-trip)</td>
<td>4.88</td>
<td>1.00</td>
<td>0.24</td>
<td>2.49</td>
<td>0.50</td>
<td>0.12</td>
</tr>
<tr>
<td>Vactor Trucks (leaving plant, one-way)</td>
<td>4.88</td>
<td>1.00</td>
<td>0.24</td>
<td>2.49</td>
<td>0.50</td>
<td>0.12</td>
</tr>
<tr>
<td>Triaxle Dump Truck (round-trip)</td>
<td>2.84</td>
<td>0.57</td>
<td>0.14</td>
<td>1.42</td>
<td>0.28</td>
<td>0.07</td>
</tr>
<tr>
<td>Leach Cleaner (round-trip)</td>
<td>0.34</td>
<td>0.19</td>
<td>0.16</td>
<td>0.47</td>
<td>0.98</td>
<td>0.02</td>
</tr>
<tr>
<td>Tanker Truck (leaving plant, one-way)</td>
<td>0.50</td>
<td>0.10</td>
<td>0.00</td>
<td>0.10</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

#### Totals

- **Total Weight driven per day (ton/day)** = 1796.4
- **Average Vehicle Weight Per Trip** = 24.3 tons/trip
- **Average Miles Per Trip** = 0.53 miles/trip
- **Unmitigated Emission Factor, EF** = 2.250 tons/mile
- **Mitigated Emission Factor, Eext** = 2.250 tons/mile
- **Maximum Weight of Loaded Vehicle** = 24.3 tons/trip
- **Average Miles Per Trip** = 0.53 miles/trip
- **Average Vehicle Weight Per Trip** = 24.3 tons/trip
- **Average  Miles Per Trip** = 0.53 miles/trip
- **Average  Miles Per Trip** = 0.53 miles/trip
- **Maximum Vehicle Weight Per Trip** = 24.3 tons/trip
- **Maximum Vehicle Weight Per Trip** = 24.3 tons/trip
- **Average Vehicle Weight Per Trip** = 24.3 tons/trip
- **Average Vehicle Weight Per Trip** = 24.3 tons/trip
- **Maximum Vehicle Weight Per Trip** = 24.3 tons/trip
- **Maximum Vehicle Weight Per Trip** = 24.3 tons/trip
## Emission Calculations - Paved Roads

**Company Name:** CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant

**Address City:** Indianapolis, IN **Zip:** 46221

**Permit No./Plt ID:** 097-40394-00032

**Reviewer:** Deena P. Levering

### Paved Roads at Industrial Site

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

<table>
<thead>
<tr>
<th>Vehicle Information (provided by source)</th>
<th>Maximum number of vehicles per day</th>
<th>Number of one-way trips per day per vehicle</th>
<th>Maximum trips per day (trip/day)</th>
<th>Maximum Weight of Loaded Vehicle (tons/trip)</th>
<th>Total Weight driven per day (ton/day)</th>
<th>Maximum one-way distance (feet/trip)</th>
<th>Maximum one-way distance (miles/day)</th>
<th>Maximum one-way distance (miles/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triaxle Dumptruck (entering plant) (one-way trip)</td>
<td>20.0</td>
<td>8.0</td>
<td>160.0</td>
<td>26.0</td>
<td>3200.0</td>
<td>3415</td>
<td>8.7</td>
<td>1489.6</td>
</tr>
<tr>
<td>Triaxle Dumptruck (leaving plant) (one-way trip)</td>
<td>20.0</td>
<td>10.0</td>
<td>200.0</td>
<td>26.0</td>
<td>3600.0</td>
<td>3027</td>
<td>9.7</td>
<td>1146.6</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>200.0</strong></td>
<td><strong>5200.0</strong></td>
<td><strong>122.0</strong></td>
<td><strong>2440.1</strong></td>
<td><strong>2090.0</strong></td>
<td><strong>122.0</strong></td>
<td><strong>2440.1</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Average Vehicle Weight Per Trip:**

\[
\text{Average Vehicle Weight Per Trip} = \frac{\text{Total Weight driven per day (ton/day)}}{\text{Maximum trips per day (trip/day)}} = \frac{2090.0}{122.0} = 17.0 \text{ tons/trip}
\]

**Unmitigated Emission Factor, } EF = k \cdot (sL)^{0.91} \cdot (W)^{1.02} \text{ (Equation 1 from AP-42 13.2.1)}

where:

- \( k = 0.011 \) - particle size multiplier (AP-42 Table 13.2.1-1)
- \( W = 26.0 \) - average vehicle weight
- \( sL = 9.7 \) - silt loading value for paved roads at municipal solid waste landfill (Table 13.2.1-3)

**Mitigated Emission Factor, } Eext = EF \cdot \left[1 - \frac{p}{4N}\right] \text{ (Equation 2 from AP-42 13.2.1)}

where:

- \( p = 125 \text{ days of rain greater than or equal to 0.01 inches} \) (see Fig. 13.2.1-2)
- \( N = 365 \text{ days per year} \)

**Mitigated Emission Factor, } Eext = EF \cdot \left[1 - \frac{p}{4N}\right] \text{ (Equation 2 from AP-42 13.2.1)}

<table>
<thead>
<tr>
<th>Process</th>
<th>Mitigated PTE of PM (tons/yr)</th>
<th>Mitigated PTE of PM10 (tons/yr)</th>
<th>Mitigated PTE of PM2.5 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triaxle Dumptruck (leaving plant) (one-way trip)</td>
<td>1.43</td>
<td>0.29</td>
<td>0.07</td>
</tr>
<tr>
<td>Triaxle Dumptruck (leaving plant) (one-way trip)</td>
<td>1.37</td>
<td>0.25</td>
<td>0.06</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>2.69</strong></td>
<td><strong>0.54</strong></td>
<td><strong>0.13</strong></td>
</tr>
</tbody>
</table>

**Methodology**

- **Total Weight driven per day (ton/day):** 
  \( \text{Total Weight driven per day (ton/day)} = \text{Total Weight driven per day (ton/day)} \cdot \frac{\text{Unmitigated PTE of PM (tons/yr)}}{\text{Average Vehicle Weight Per Trip (ton/trip)}} \cdot \frac{\text{Maximum trips per day (trip/day)}}{\text{Maximum trips per day (trip/day)}} \cdot \frac{\text{Maximum one-way distance (miles/year)}}{\text{Maximum one-way distance (miles/year)}} \)
- **Maximum one-way distance (miles/year):** 
  \( \text{Maximum one-way distance (miles/year)} = \text{Maximum one-way distance (miles/year)} \cdot \text{Maximum one-way distance (miles/year)} \cdot \text{Average Vehicle Weight Per Trip (ton/trip)} \)

- **Average Vehicle Weight Per Trip (ton/trip):** 
  \( \frac{\text{Total Weight driven per day (ton/day)}}{\text{Maximum trips per day (trip/day)}} \cdot \frac{\text{Maximum one-way distance (miles/year)}}{\text{Maximum one-way distance (miles/year)}} \)

- **Unmitigated PTE (tons/yr):** 
  \( \text{Unmitigated PTE (tons/yr)} = \text{Maximum one-way distance (miles/year)} \cdot \text{Unmitigated Emission Factor (lb/mile)} \cdot \frac{\text{Unmitigated PTE (tons/yr)}}{\text{Average Vehicle Weight Per Trip (ton/trip)}} \)

- **Mitigated PTE (Before Control) (tons/yr):** 
  \( \text{Mitigated PTE (Before Control) (tons/yr)} = \text{Unmitigated PTE (tons/yr)} \cdot \frac{\text{Mitigated Emission Factor (lb/mile)}}{\text{Average Vehicle Weight Per Trip (ton/trip)}} \)

**Abbreviations**

- PM = Particulate Matter
- PM10 = Particulate Matter (>10 um)
- PM2.5 = Particulate Matter (<2.5 um)
- PTE = Potential to Emit
### Unpaved Roads at Industrial Site

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (11/2006).

<table>
<thead>
<tr>
<th>Vehicle Information (provided by source)</th>
<th>Maximum number of vehicles</th>
<th>Number of one-way trips per day per vehicle</th>
<th>Maximum trips per day (trip/day)</th>
<th>Maximum Weight of Loaded Vehicle (tons/trip)</th>
<th>Total Weight driven per day (ton/day)</th>
<th>Maximum one-way distance (feet/trip)</th>
<th>Maximum one-way distance (miles/day)</th>
<th>Maximum one-way miles (miles/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle driving on loop road (one-way trip)</td>
<td>5.0</td>
<td>1.0</td>
<td>5.0</td>
<td>2.5</td>
<td>12.5</td>
<td>5000</td>
<td>0.947</td>
<td>4.7</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Vehicle Weight Per Trip = Average Miles Per Trip =</td>
<td>2.5 0.95</td>
<td></td>
<td>2.5 0.95</td>
<td></td>
<td>2.5 0.95</td>
<td>2.5 0.95</td>
<td>0.947</td>
<td>4.7</td>
</tr>
</tbody>
</table>

Unmitigated Emission Factor, $E_f = k \times (s/12)^a \times (W/3)^b$  
(Equation 1a from AP-42 13.2.2)

<table>
<thead>
<tr>
<th>$k$</th>
<th>$s$</th>
<th>$a$</th>
<th>$W$</th>
<th>$b$</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.9</td>
<td>6.0</td>
<td>0.7</td>
<td>2.5</td>
<td>0.45</td>
</tr>
</tbody>
</table>

\[ k = \text{particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)} \]
\[ s = \text{mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Iron and Steel Production)} \]
\[ a = \text{constant (AP-42 Table 13.2.2-2 for Industrial Roads)} \]
\[ W = \text{average vehicle weight} \]
\[ b = \text{constant (AP-42 Table 13.2.2-2 for Industrial Roads)} \]

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, $E_{ext} = E \times \left( \frac{365 - P}{365} \right)$  
(Equation 2 from AP-42 13.2.2)

<table>
<thead>
<tr>
<th>$P$</th>
</tr>
</thead>
<tbody>
<tr>
<td>125</td>
</tr>
</tbody>
</table>

\[ E_{ext} = E \times \left( \frac{365 - P}{365} \right) \]

<table>
<thead>
<tr>
<th>Process</th>
<th>Mitigated PTE of PM (Before Control) (tons/yr)</th>
<th>Mitigated PTE of PM10 (Before Control) (tons/yr)</th>
<th>Mitigated PTE of PM2.5 (Before Control) (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle (entering plant) (one-way trip)</td>
<td>1.58</td>
<td>0.42</td>
<td>0.04</td>
</tr>
<tr>
<td>Totals</td>
<td>1.58</td>
<td>0.42</td>
<td>0.04</td>
</tr>
</tbody>
</table>

**Methodology**

- Total Weight driven per day (ton/day) = [Maximum Weight of Loaded Vehicle (tons/trip)] * [Maximum trips per day (trip/day)]
- Maximum one-way distance (miles/day) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]
- Average Vehicle Weight Per Trip (ton/trip) = [SUM(Total Weight driven per day (ton/day)) / SUM(Maximum trips per day (trip/day))]
- Average Miles Per Trip (miles/trip) = [SUM(Maximum one-way miles (miles/day)) / SUM(Maximum trips per year (trip/day))]
- Mitigated PTE (Before Control) (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)

**Abbreviations**

- PM = Particulate Matter
- PM10 = Particulate Matter (<10 um)
- PM2.5 = Particulate Matter (<2.5 um)
- PTE = Potential to Emit
October 15, 2019

Ann Mclver
CWA Authority Inc Belmont Adv Wastewater Treatment
2150 Dr Martin Luther King Jr St
Indianapolis, IN 46202

Re: Public Notice
CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant
Permit Level: Title V Renewal
Permit Number: 097-40933-00032

Dear Ann Mclver:

Enclosed is a copy of your draft Title V Renewal, Technical Support Document, emission calculations, and the Public Notice.

The Public Notice period will begin the date the Notice is published on the IDEM Official Public Notice website. Publication has been requested and is expected within 2-3 business days. You may check the exact Public Notice begins and ends date here: https://www.in.gov/idem/5474.htm

Please note that as of April 17, 2019, IDEM is no longer required to publish the notice in a newspaper.

OAQ has submitted the draft permit package to the West Indianapolis Library Branch, 1216 South Kappes St. in Indianapolis IN 46221. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Deena Levering, 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 4-5400 or dial (317) 234-5400.

Sincerely,

L. Pogost

L. Pogost
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover Letter 4/12/19
October 15, 2019

To: West Indianapolis Library Branch 1216 South Kappes St. Indianapolis IN 46221 (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: CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant
Permit Number: 097-40933-00032

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

October 15, 2019
CWA Authority, Inc. - Belmont Advanced Wastewater Treatment Plant
097-40933-00032

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 Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.

Enclosure
PN AAA Cover Letter 4/12/2019
Mail Code 61-53

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<td>Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204</td>
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<td>Ann McIver CWA Authority Inc Belmont Adv Wastewater Treatment 2150 Dr Martin Luther King Jr St Indianapolis IN 46202 (Source CAATS)</td>
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<td>Jeffrey Hansen CWA Authority Inc Belmont Adv Wastewater Treatment 2700 S Belmont Ave Indianapolis IN 46221 (RO CAATS)</td>
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<td>West Indianapolis Library Branch 1216 South Kappes St. Indianapolis IN 46221 (Library)</td>
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<td>Lawrence City Council and Mayors Office 9001 East 59th Street #205 Lawrence IN 46216 (Local Official)</td>
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<td>Marion County Commissioners 200 E. Washington St. City County Bldg., Suite 801 Indianapolis IN 46204 (Local Official)</td>
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