**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**
*We Protect Hoosiers and Our Environment.*
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

**Michael R. Pence**
*Governor*

**Thomas W. Easterly**
*Commissioner*

| | |
|---|---|
| To: | Interested Parties |
| Date: | May 11, 2015 |
| From: | Matthew Stuckey, Chief<br>Permits Branch<br>Office of Air Quality |
| Source Name: | MGPI of Indiana LLC |
| Permit Level: | Title V SSM |
| Permit Number: | 029-35496-00005 |
| Source Location: | 7 Ridge Ave Lawrenceburg, IN 47025 |
| Type of Action Taken: | Modification at an existing source |

# Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the matter referenced above.

The final decision is available on the IDEM website at: http://www.in.gov/apps/idem/caats/
To view the document, select Search option 3, then enter permit 35496.

If you would like to request a paper copy of the permit document, please contact IDEM's central file room:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

*(continues on next page)*

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

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*Commissioner*

Mr. William R. Graves
MGPI of Indiana, LLC
7 Ridge Avenue
Lawrenceburg, IN 47025

May 11, 2015

Re: 029-35496-00005
Significant Source Modification

Dear Mr. Graves:

MGPI of Indiana, LLC was issued Part 70 Operating Permit Renewal No. T029-32119-00005 on June 20, 2014 for a stationary distilled spirits production source located at 7 Ridge Avenue, Lawrenceburg, IN 47025. An application to modify the source was received on February 23, 2015. Pursuant to the provisions of 326 IAC 2-7-10.5, a Significant Source Modification is hereby approved as described in the attached Technical Support Document.

Pursuant to 326 IAC 2-7-10.5, the following emission units are approved for construction at the source:

(a) One (1) DDG dryer operation, approved in 2015 for construction, identified as EU-39, with emission controlled by four (4) cyclones (CE-39a) and an 8 MMBtu/hr RTO (CE-39b), exhausting to stack S-320, and consisting of the following:

(1) One (1) DDG Dryer, with a maximum heat input of 45 MMBtu/hr and a maximum throughput of 9.56 tons/hr.

(2) One (1) screw K-valve, identified as Screw #1 K-Valve.

(3) Three (3) enclosed feed conveyors, identified as #11 - #13.

(4) One (1) agitator mixer and inlet screw.

(e) One (1) box screw, approved in 2015 for construction, identified as Drop Box Screw. All emissions from this unit are routed to the existing cooler and transport system (EU-32) and controlled by a cyclone, exhausting to Stack S- 310.

(f) One (1) drag conveyor, approved in 2015 for construction. All emissions from this unit are routed to the existing cooler and transport system (EU-32) and controlled by a cyclone, exhausting to Stack S- 310.

(g) One (1) recycle screw, approved in 2015 for construction. All emissions from this unit are routed to the existing cooler and transport system (EU-32) and controlled by a cyclone, exhausting to Stack S- 310.

(h) One (1) K-Valve, approved in 2015 for construction. All emissions from this unit are routed to the existing cooler and transport system (EU-32) and controlled by a cyclone, exhausting to Stack S- 310.

(i) Three (3) product conveyors, approved in 2015 for construction, identified as #21 - #23. All emissions from these units are routed to the existing cooler and transport system (EU-32) and controlled by a cyclone, exhausting to Stack S- 310.

(j) One (1) wet cake storage pad, approved in 2015 for construction, identified as EU-40, with a maximum throughput of 24.56 tons per hour, with emissions uncontrolled.

The following construction conditions are applicable to the proposed modification:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

3. Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

Commenced Construction

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(j), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Approval to Construct

6. Pursuant to 326 IAC 2-7-10.5(h)(2), this Significant Source Modification authorizes the construction of the new emission unit(s), when the Significant Source Modification has been issued.

   Pursuant to 326 IAC 2-7-10.5(m), the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

   Pursuant to 326 IAC 2-7-12, operation of the new emission unit(s) is not approved until the Significant Permit Modification has been issued. Operating conditions shall be incorporated into the Part 70 Operating Permit as a Significant Permit Modification in accordance with 326 IAC 2-7-10.5(m)(2) and 326 IAC 2-7-12 (Permit Modification).

A copy of the permit is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5.

If you have any questions on this matter, please contact Kristen Willoughby of my staff, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Kristen Willoughby or extension 3-3031 or dial (317) 233-3031.

Sincerely,

Jenny Acker, Section Chief
Permits Branch
Office of Air Quality

Attachments: Significant Source Modification and Technical Support Document

cc: File - Dearborn County
Dearborn County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch
IDEM Southeast Regional Office

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*Commissioner*

# Significant Source Modification to a Part 70 Source

# OFFICE OF AIR QUALITY

## MGPI of Indiana
## 7 Ridge Avenue
## Lawrenceburg, Indiana 47025

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

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. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.

| Significant Source Modification No.: 029-35496-00005 | |
|---|---|
| Issued by:<br><br>Jenny Acker, Section Chief, Permits Branch<br>Office of Air Quality | Issuance Date: May 11, 2015 |

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Attachment A: 40 CFR 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Attachment B: 40 CFR Part 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Attachment C: 40 CFR 63 Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants (NESHAP) for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters

## 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 distilled spirits production source.

| | |
|---|---|
| Source Address: | 7 Ridge Avenue, Lawrenceburg, Indiana 47025 |
| General Source Phone Number: | 812-496-0013 |
| SIC Code: | 2085 |
| County Location: | Dearborn |
| Source Location Status: | Nonattainment under the 8-hour ozone standard<br>Attainment for all other criteria pollutants |
| Source Status: | Part 70 Operating Permit Program<br>Major Source, under PSD and Emission Offset Rules<br>Major Source, Section 112 of the Clean Air Act<br>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) grain receiving and pneumatic conveyor, identified as EU-11, installed prior to 1950, equipped with a dust collector, exhausting to Stack S-103, capacity: 28.0 tons of corn, rye, barley and/or malt per hour.

(b) One (1) corn receiving and storage system, identified as EU-12, installed in 1997, consisting of the following equipment:

(1) One (1) unloading hopper, equipped with baghouse using fabric filters for particulate matter control exhausting to Stack S-111, capacity: 196 tons of corn per hour.

(2) One (1) conveyor and bucket elevator, equipped with baghouse using fabric filters for particulate matter control exhausting to Stack S-111, capacity: 196 tons of corn per hour.

(3) One (1) storage silo, equipped with baghouse using fabric filters for particulate matter control, exhausting to Stack S-111, capacity: 75,000 bushels of corn.

(4) One (1) grain cleaner, equipped with baghouse using fabric filters for particulate matter control, exhausting to Stack S-111, capacity: 26.6 tons of corn per hour.

(5) One (1) grain transport system, equipped with baghouse using fabric filters for particulate matter control, exhausting to Stack S-112, capacity: 26.6 tons of corn per hour.

(c) Seven (7) storage bins, collectively identified as EU-13, installed prior to 1950, equipped with baghouse using fabric filters for particulate matter control, exhausting inside, five (5) with a capacity of 8,000 bushels, each and two (2) with a capacity of 4,000 bushels, each.

(d) Six (6) hammermills and hopper, collectively identified as EU-14, installed prior to 1950, equipped with a baghouse for particulate matter control, exhausting inside through Stack S-104, capacity: 109,760 pounds of grain per hour, total.

(e) Three (3) multi-column stills and five (5) distillation columns, collectively identified as EU-20, installed prior to 1950, consisting of the following:

(1) One (1) spirits still (V-2), exhausting to Stack S-210, capacity: 583 proof gallons per hour,

(2) One (1) spirits still (V-3), exhausting to Stack S-210, capacity: 750 proof gallons per hour,

(3) One (1) spirits still (V-15), exhausting to Stack S-210, capacity: 3,750 proof gallons per hour;

(4) One (1) distillation column, exhausting to Stack S-211, and

(5) Four (4) unused distillation columns, exhausting to Stack S-211.

(f) EU-21, consisting of the following units:

(1) Three (3) open fermenters, installed prior to 1950, exhausting to Stack S-201, capacity: 25,300 gallons, each.

(2) Five (5) open fermenters, installed in 2004, exhausting to Stack S-201, capacity: 27,854 gallons, each.

(3) Three (3) open fermenters, installed in 2005, exhausting to Stack S-201, capacity: 27,854 gallons, each.

(4) Three (3) open fermenters, installed in 2006, exhausting to Stack S-201, capacity: 27,854 gallons, each.

(g) Twenty-four (24) closed fermenters, collectively identified as EU-22, installed prior to 1950, equipped with one (1) ethanol scrubber that operates when the fermentation vent stream is routed for $CO_2$ recovery, exhausting to Stack S-202, capacity: 55,000 gallons, each.

(h) Two (2) beer wells, identified as EU-23 and EU-24, installed prior to 1950, exhausting to Stacks S-203 and S-204 respectively, capacity: 38,886 and 102,098 gallons, respectively.

(i) Three (3) beer stills, collectively identified as EU-25, installed prior to 1950, exhausting to Stack S-205, consisting of the following:

(1) Still #25, capacity: 4,600 gallons per hour,

(2) Still #26, capacity: 14,600 gallons per hour; and

(3) Still #31, capacity: 12,000 gallons per hour.

(j) Two (2) column & kettles, collectively identified as EU-26, installed prior to 1950, exhausting to Stack S-206, capacity: 727 proof gallons per hour, each.

(k) Three (3) gin stills (#10, #22, and #23), collectively identified as EU-27, installed prior to 1950, exhausting to Stack S-207, capacity: 600 proof gallons per hour, each.

(l) One (1) doubler still, identified as EU-29, installed prior to 1950, exhausting to Stack S-209, capacity: 672 proof gallons per hour.

(m) Four (4) paddle screens, collectively identified as EU-31, installed prior to 1950, exhausting to Stack S-301, capacity: 56,000 pounds per hour, each.

(n) Five (5) rotary dryers, one (1) cooler and one (1) transport system, collectively identified as EU-32, installed prior to 1950, consisting of the following:

(1) Two (2) rotary dryers, exhausting to Stacks S-305 and S-306, each equipped with a wet scrubber, capacity: 25,500 pounds of grain per hour inlet, each,

(2) Three (3) rotary dryers, exhausting to Stacks S-307 through S-309, each controlled by a wet scrubber, capacity: 14,500 pounds of grain per hour inlet, each; and

(3) One (1) cooler, with a maximum throughput of 9.56 tons of DDG per hour, with emissions uncontrolled.

(4) One (1) transport system, with a maximum throughput of 9.56 tons of DDG per hour, approved for modification in 2015, controlled by a cyclone, exhausting to Stack S- 310, and consisting of the following:

(A) One (1) hammermill.

(B) Four (4) screw conveyors.

(C) Two (2) drag conveyors.

(D) Three (3) product conveyors.

(E) One (1) K-valve.

(o) Three (3) conveyors, collectively identified as EU-33, installed prior to 1950, exhausting to Stacks S-302 through S-304, capacity: 38,000 pounds of grain per hour, each.

(p) One (1) DDG (Distillers Dried Grain) loadout system, installed in 1997, consisting of the following:

(1) Two (2) storage silos, and two (2) surge hoppers, collectively identified as EU-34, equipped with two (2) dust collectors, exhausting to Stacks S-341 through S-344, capacity: 13,100 cubic feet, total for the two (2) storage silos, each and 14,000 pounds of grain per hour, each, for the two (2) surge hoppers.

(2) One (1) air transport system and scale to the rail car loading area, identified as EU-35, controlled by a dust collector, exhausting to Stack S-350, capacity: 14,000 pounds of grain per hour.

(3) One (1) air transport system and scale to the truck loading area, identified as EU-36, controlled by a dust collector, exhausting to Stack S-360, capacity: 14,000 pounds of grain per hour.

(4) One (1) rail car loader, identified as EU-37, exhausting to Stack S-370, capacity: 14,000 pounds of grain per hour.

(5) One (1) truck loader, identified as EU-38, exhausting to Stack S-380, capacity: 14,000 pounds of grain per hour.

(q) One (1) DDG dryer operation, approved in 2015 for construction, identified as EU-39, with emission controlled by four (4) cyclones (CE-39a) and an 8 MMBtu/hr RTO (CE-39b), exhausting to stack S-320, and consisting of the following:

(1) One (1) DDG Dryer, with a maximum heat input of 45 MMBtu/hr and a maximum throughput of 9.56 tons/hr DDG.

(2) One (1) screw K-valve, identified as Screw #1 K-Valve.

(3) Three (3) enclosed feed conveyors, identified as #11 - #13.

(4) One (1) agitator mixer and inlet screw.

(r) One (1) wet cake storage pad, approved in 2015 for construction, identified as EU-40, with a maximum throughput of 24.56 tons per hour wet cake, with emissions uncontrolled.

(s) One (1) wine room, identified as EU-41, consisting of forty-three (43) organic liquid storage tanks, installed prior to 1950, exhausting to Stack S-410, capacity: 524,504 gallons of ethanol, total and a throughput of 32,000,000 proof gallons per year, total, consisting of the following:

(1) Thirty-five (35) organic liquid storage tanks, installed prior to 1950, capacity: 467,518 gallons of ethanol, total.

(2) Eight (8) organic liquid storage tanks, installed in 1988, capacity: 56,986 gallons of ethanol, total.

(t) One (1) tank farm, identified as EU-42, consisting of nine (9) organic liquid storage tanks, installed prior to 1950, exhausting to Stack S-420, capacity: 750,000 gallons of ethanol, each.

(u) EU-43, consisting of the following units:

(1) One (1) Bldg. 88, consisting of twenty-seven (27) organic liquid storage tanks, installed in 1989, exhausting to Stack S-430, capacity: 489,250 gallons of ethanol, total.

(2) One (1) rum handling area, installed in 1997, exhausting to the atmosphere, capacity: 3,501,429 gallons of rum.

(v) One (1) mini tank farm, identified as EU-45, consisting of eight (8) tanks:

(1) Seven organic liquid storage (7) tanks, installed in 1989, exhausting to Stack S-435, capacity: 779,800 gallons of ethanol, total.

(2) One (1) organic liquid storage tank, installed in 1994, capacity: 3,500 gallons of ethanol.

(w) One (1) barrel filling and emptying operation, identified as EU-61, installed prior to 1950, exhausting to Stack S-610, with a throughput capacity of 13,000,000 proof gallons and 12,775,000 proof gallons of whiskey and gin per year, respectively, and a maximum capacity of 29,700 gallons of whiskey and gin per hour.

(x) One (1) Warehouse C, identified as EU-71, installed prior to 1950, exhausting to Vent 701, capacity: 69,306 barrels.

(y) One (1) Warehouse E, identified as EU-72, installed prior to 1950, exhausting to Vent 702, capacity: 101,032 barrels.

(z) One (1) Warehouse G, identified as EU-73, installed prior to 1950, exhausting to Vent 703, capacity: 84,097 barrels.

(aa) One (1) Warehouse J & M, identified as EU-74, installed prior to 1950, exhausting to Vent 704, capacity: 100,000 barrels.

(bb) One (1) Warehouse L, identified as EU-75, installed prior to 1950, exhausting to Vent 705, capacity: 93,438 barrels.

(cc) One (1) Warehouse N, identified as EU-76, installed prior to 1950, exhausting to Vent 706, capacity: 93,405 barrels.

(dd) One (1) steam boiler, identified as EU-96, installed in 1977, using natural gas and exhausting to Stack S-906, heat input capacity: 244 million British thermal units per hour.

Under 40 CFR 63, Subpart DDDDD, this facility is an affected unit.

(ee) One (1) natural gas fired steam boiler, identified as EU-97, using #2 fuel oil as back-up, installed in 1992, exhausting to Stack S-907, heat input capacity: 47.6 million British thermal units per hour using natural gas and 45.6 million British thermal units using #2 fuel oil.

Under 40 CFR 60, Subpart Dc, this facility is considered an industrial, institutional, or commercial boiler. Under 40 CFR 63, Subpart DDDDD, this facility is an affected unit.

(ff) One (1) loading rack system, consisting of four (4) rail car and four (4) truck loading racks, identified as EU-46, installed in 1989, exhausting to the atmosphere, capacity: 31,000,000 gallons of ethanol per year.

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) Paved and unpaved roads and parking lots with public access [326 IAC 6-4].

(b) Emergency generators as follows: diesel generators not exceeding 1,600 horsepower.

(1) One (1) Diesel-fired emergency generator, with a maximum capacity of 1600 hp and installed in 1999. [326 IAC 2-2]

Under 40 CFR Part 63, Subpart ZZZZ, this generator is an affected unit.

(c) Other emergency equipment as follows: stationary fire pumps.

(1) One (1) Diesel-fired emergency fire water pump with a maximum capacity of 235 horsepower and installed in 1996. [326 IAC 2-2]

Under 40 CFR Part 63, Subpart ZZZZ, this generator is an affected unit.

(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 a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations [326 IAC 6-3-2].

(e) A gasoline and fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.

(1) One (1) gasoline tank, with a maximum capacity of 200 gallons and a monthly throughput less than 100 gallons.

(f) Activities associated with emergencies, including natural gas reciprocating engines not exceeding 16,000 horsepower.

(1) One (1) Natural gas-fired emergency generator, with a maximum capacity of 0.121 MMBtu/hr and installed in 2005. [326 IAC 2-2]

Under 40 CFR Part 63, Subpart ZZZZ, this generator is an affected unit.

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

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

(a) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.

(1) One (1) diesel fuel tank with storage capacity of 200 gallons.

(b) The following VOC and HAP storage containers: storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons; vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.

(c) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6, constructed before 1970.

(d) Cleaners and solvents characterized as follows: having a vapor pressure equal to or less than 2 kiloPascals; 15 millimeters of mercury; or 0.3 pounds per square inch measured at 38˚C (100˚F) or; having a vapor pressure equal to or less than 0.7 kiloPascals; 5 millimeters of mercury; or 0.1 pounds per square inch measured at 20˚C (68˚F); the use of

which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

(e) Closed loop heating and cooling systems.

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

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

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

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

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

(k) 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.

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

## A.5 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, T029-32119-00005, 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 July 1 of each year to:

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

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 or Southeast Regional Office 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
Southeast Regional Office phone: (812) 358-2027; fax: (812) 358-2058**.**

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

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) All terms and conditions of permits established prior to T029-32119-00005 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

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

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

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

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

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

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

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

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

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

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

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

Request for renewal shall be submitted to:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(4) The Permittee notifies the:

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

and

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

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

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

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

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

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

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

(3) Any change in emissions; and

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

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

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

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

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

B.20 Source Modification Requirement [326 IAC 2-7-10.5]

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

B.21 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

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

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

C.5 Fugitive Dust Emissions [326 IAC 6-4]

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

C.6 Stack Height [326 IAC 1-7]

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

C.7 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.8 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.9 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.10 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)][40 CFR 64][326 IAC 3-8]

(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) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(d) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. 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.11 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.12 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.13 Risk Management Plan [326 IAC 2-7-5(12)][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.14 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5][326 IAC 2-7-6]

(I) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, 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.

(II)

(a) CAM *Response to excursions or exceedances.*

(1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the 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 emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial

inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(2) 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, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

(b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

(c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a QIP. The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.

(d) Elements of a QIP:
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).

(e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

(f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:

(1) Failed to address the cause of the control device performance problems; or

(2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

(h) *CAM recordkeeping requirements.*

(1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(a)(2) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements

C.15 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.16 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.17 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(y)) may

result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

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

(A) A description of the project.

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

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

(i) Baseline actual emissions;

(ii) Projected actual emissions;

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

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

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

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

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

C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)][326 IAC 2-1.1-11][326 IAC 2-2][326 IAC 2-3][40 CFR 64][326 IAC 3-8]

(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.

On and after the date by which the Permittee must use monitoring that meets the requirements of 40 CFR Part 64 and 326 IAC 3-8, the Permittee shall submit CAM reports to the IDEM, OAQ.

A report for monitoring under 40 CFR Part 64 and 326 IAC 3-8 shall include, at a minimum, the information required under paragraph (a) of this condition and the following information, as applicable:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in Section C-Response to Excursions or Exceedances. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

The Permittee may combine the Quarterly Deviation and Compliance Monitoring Report and a report pursuant to 40 CFR 64 and 326 IAC 3-8.

(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.19 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 FACILITY OPERATION CONDITIONS

**Emission Unit Description: Grain Handling, Fermentation, and Distillation**

(a) One (1) grain receiving and pneumatic conveyor, identified as EU-11, installed prior to 1950, equipped with a dust collector, exhausting to Stack S-103, capacity: 28.0 tons of corn, rye, barley and/or malt per hour.

(b) One (1) corn receiving and storage system, identified as EU-12, installed in 1997, consisting of the following equipment:

(1) One (1) unloading hopper, equipped with baghouse using fabric filters for particulate matter control exhausting to Stack S-111, capacity: 196 tons of corn per hour.

(2) One (1) conveyor and bucket elevator, equipped with baghouse using fabric filters for particulate matter control exhausting to Stack S-111, capacity: 196 tons of corn per hour.

(3) One (1) storage silo, equipped with baghouse using fabric filters for particulate matter control, exhausting to Stack S-111, capacity: 75,000 bushels of corn.

(4) One (1) grain cleaner, equipped with baghouse using fabric filters for particulate matter control, exhausting to Stack S-111, capacity: 26.6 tons of corn per hour.

(5) One (1) grain transport system, equipped with baghouse using fabric filters for particulate matter control, exhausting to Stack S-112, capacity: 26.6 tons of corn per hour.

(c) Seven (7) storage bins, collectively identified as EU-13, installed prior to 1950, equipped with baghouse using fabric filters for particulate matter control, exhausting inside, five (5) with a capacity of 8,000 bushels, each and two (2) with a capacity of 4,000 bushels, each.

(d) Six (6) hammermills and hopper, collectively identified as EU-14, installed prior to 1950, equipped with a baghouse for particulate matter control, exhausting inside through Stack S-104, capacity: 109,760 pounds of grain per hour, total.

(e) Three (3) multi-column stills and five (5) distillation columns, collectively identified as EU-20, installed prior to 1950, consisting of the following:

(1) One (1) spirits still (V-2), exhausting to Stack S-210, capacity: 583 proof gallons per hour,

(2) One (1) spirits still (V-3), exhausting to Stack S-210, capacity: 750 proof gallons per hour,

(3) One (1) spirits still (V-15), exhausting to Stack S-210, capacity: 3,750 proof gallons per hour;

(4) One (1) distillation column, exhausting to Stack S-211, and

(5) Four (4) unused distillation columns, exhausting to Stack S-211.

(f) EU-21, consisting of the following units:

(1) Three (3) open fermenters, installed prior to 1950, exhausting to Stack S-201, capacity: 25,300 gallons, each.

(2) Five (5) open fermenters, installed in 2004, exhausting to Stack S-201, capacity: 27,854 gallons, each.

(3) Three (3) open fermenters, installed in 2005, exhausting to Stack S-201, capacity: 27,854 gallons, each.

(4) Three (3) open fermenters, installed in 2006, exhausting to Stack S-201, capacity: 27,854 gallons, each.

(g) Twenty-four (24) closed fermenters, collectively identified as EU-22, installed prior to 1950, equipped with one (1) ethanol scrubber that operates when the fermentation vent stream is routed for $CO_2$ recovery, exhausting to Stack S-202, capacity: 55,000 gallons, each.

(h) Two (2) beer wells, identified as EU-23 and EU-24, installed prior to 1950, exhausting to Stacks S-203 and S-204 respectively, capacity: 38,886 and 102,098 gallons, respectively.

(i) Three (3) beer stills, collectively identified as EU-25, installed prior to 1950, exhausting to Stack S-205, consisting of the following:

(1) Still #25, capacity: 4,600 gallons per hour,

(2) Still #26, capacity: 14,600 gallons per hour; and

(3) Still #31, capacity: 12,000 gallons per hour.

(j) Two (2) column & kettles, collectively identified as EU-26, installed prior to 1950, exhausting to Stack S-206, capacity: 727 proof gallons per hour, each.

(k) Three (3) gin stills (#10, #22, and #23), collectively identified as EU-27, installed prior to 1950, exhausting to Stack S-207, capacity: 600 proof gallons per hour, each.

(l) One (1) doubler still, identified as EU-29, installed prior to 1950, exhausting to Stack S-209, capacity: 672 proof gallons per hour.

(m) Four (4) paddle screens, collectively identified as EU-31, installed prior to 1950, exhausting to Stack S-301, capacity: 56,000 pounds per hour, each.

(n) Five (5) rotary dryers, one (1) cooler and one (1) transport system, collectively identified as EU-32, installed prior to 1950, consisting of the following:

(1) Two (2) rotary dryers, exhausting to Stacks S-305 and S-306, each equipped with a wet scrubber, capacity: 25,500 pounds of grain per hour inlet, each,

(2) Three (3) rotary dryers, exhausting to Stacks S-307 through S-309, each controlled by a wet scrubber, capacity: 14,500 pounds of grain per hour inlet, each; and

(3) One (1) cooler, with a maximum throughput of 9.56 tons of DDG per hour, with emissions uncontrolled.

(4) One (1) transport system, with a maximum throughput of 9.56 tons of DDG per hour, approved for modification in 2015, controlled by a cyclone, exhausting to Stack S- 310, and consisting of the following:

(A) One (1) hammermill.

(B) Four (4) screw conveyors.

(C) Two (2) drag conveyors.

(D) Three (3) product conveyors.

(E) One (1) K-valve.

(o) Three (3) conveyors, collectively identified as EU-33, installed prior to 1950, exhausting to Stacks S-302 through S-304, capacity: 38,000 pounds of grain per hour, each.

(p) One (1) DDG (Distillers Dried Grain) loadout system, installed in 1997, consisting of the following:

(1) Two (2) storage silos, and two (2) surge hoppers, collectively identified as EU-34, equipped with two (2) dust collectors, exhausting to Stacks S-341 through S-344, capacity: 13,100 cubic feet, total for the two (2) storage silos, each and 14,000 pounds of grain per hour, each, for the two (2) surge hoppers.

(2) One (1) air transport system and scale to the rail car loading area, identified as EU-35, controlled by a dust collector, exhausting to Stack S-350, capacity: 14,000 pounds of grain per hour.

(3) One (1) air transport system and scale to the truck loading area, identified as EU-36, controlled by a dust collector, exhausting to Stack S-360, capacity: 14,000 pounds of grain per hour.

(4) One (1) rail car loader, identified as EU-37, exhausting to Stack S-370, capacity: 14,000 pounds of grain per hour.

(5) One (1) truck loader, identified as EU-38, exhausting to Stack S-380, capacity: 14,000 pounds of grain per hour.

(q) One (1) DDG dryer operation, approved in 2015 for construction, identified as EU-39, with emission controlled by four (4) cyclones (CE-39a) and an 8 MMBtu/hr RTO (CE-39b), exhausting to stack S-320, and consisting of the following:

(1) One (1) DDG Dryer, with a maximum heat input of 45 MMBtu/hr and a maximum throughput of 9.56 tons/hr DDG.

(2) One (1) screw K-valve, identified as Screw #1 K-Valve.

(3) Three (3) enclosed feed conveyors, identified as #11 - #13.

(4) One (1) agitator mixer and inlet screw.

(r) One (1) wet cake storage pad, approved in 2015 for construction, identified as EU-40, with a maximum throughput of 24.56 tons per hour wet cake, with emissions uncontrolled.

(s) One (1) wine room, identified as EU-41, consisting of forty-three (43) organic liquid storage tanks, installed prior to 1950, exhausting to Stack S-410, capacity: 524,504 gallons of ethanol, total and a throughput of 32,000,000 proof gallons per year, total, consisting of the following:

(1) Thirty-five (35) organic liquid storage tanks, installed prior to 1950, capacity: 467,518 gallons of ethanol, total.

(2) Eight (8) organic liquid storage tanks, installed in 1988, capacity: 56,986 gallons of ethanol, total.

(t) One (1) tank farm, identified as EU-42, consisting of nine (9) organic liquid storage tanks, installed prior to 1950, exhausting to Stack S-420, capacity: 750,000 gallons of ethanol, each.

(u) EU-43, consisting of the following units:

(1) One (1) Bldg. 88, consisting of twenty-seven (27) organic liquid storage tanks, installed in 1989, exhausting to Stack S-430, capacity: 489,250 gallons of ethanol, total.

(2) One (1) rum handling area, installed in 1997, exhausting to the atmosphere, capacity: 3,501,429 gallons of rum.

(v) One (1) mini tank farm, identified as EU-45, consisting of eight (8) tanks:

(1) Seven organic liquid storage (7) tanks, installed in 1989, exhausting to Stack S-435, capacity: 779,800 gallons of ethanol, total.

(2) One (1) organic liquid storage tank, installed in 1994, capacity: 3,500 gallons of ethanol.

(w) One (1) barrel filling and emptying operation, identified as EU-61, installed prior to 1950, exhausting to Stack S-610, with a throughput capacity of 13,000,000 proof gallons and 12,775,000 proof gallons of whiskey and gin per year, respectively, and a maximum capacity of 29,700 gallons of whiskey and gin per hour.

(x) One (1) Warehouse C, identified as EU-71, installed prior to 1950, exhausting to Vent 701, capacity: 69,306 barrels.

(y) One (1) Warehouse E, identified as EU-72, installed prior to 1950, exhausting to Vent 702, capacity: 101,032 barrels.

(z) One (1) Warehouse G, identified as EU-73, installed prior to 1950, exhausting to Vent 703, capacity: 84,097 barrels.

(aa) One (1) Warehouse J & M, identified as EU-74, installed prior to 1950, exhausting to Vent 704, capacity: 100,000 barrels.

(bb) One (1) Warehouse L, identified as EU-75, installed prior to 1950, exhausting to Vent 705, capacity: 93,438 barrels.

(cc) One (1) Warehouse N, identified as EU-76, installed prior to 1950, exhausting to Vent 706, capacity: 93,405 barrels.

(ff) One (1) loading rack system, consisting of four (4) rail car and four (4) truck loading racks, identified as EU-46, installed in 1989, exhausting to the atmosphere, capacity: 31,000,000 gallons of ethanol per year.

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

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

D.1.1 Volatile Organic Compounds (VOC) BACT Limits [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6, the Permittee shall comply with the following Best Available Control Technology (BACT) requirements:

(a) The VOC emissions from the DDG dryer (EU-39) shall be controlled by an RTO.

(b) The RTO shall operate with an overall control efficiency, which includes capture and destruction efficiencies, of not less than 98%.

(c) The VOC emissions from the DDG dryer (EU-39) shall not exceed 1.91 lb/hr.

D.1.2 PSD Minor Limit [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 total dryer feed rate for the Rotary Dryers (EU-32) shall not exceed 147,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The PM2.5 emissions from the Rotary Dryers (EU-32) shall not exceed 0.27 lb/ton.

(c) The PM emissions form the Transport System (EU-32) shall not exceed 1.22 lbs/hr.

(d) The PM10 emissions from the Transport System (EU-32) shall not exceed 0.82 lbs/hr.

(e) The PM2.5 emissions from the Transport System (EU-32) shall not exceed 0.40 lbs/hr.

(f) The PM emissions from the DDG Dryer Operation (EU-39) shall not exceed 1.91 lbs/hr.

(g) The PM10 emissions from the DDG Dryer Operation (EU-39) shall not exceed 1.91 lbs/hr.

(h) The PM2.5 emissions from the DDG Dryer Operation (EU-39) shall not exceed 1.91 lbs/hr.

(i) The CO emissions from the DDG Dryer Operation (EU-39) shall not exceed 10.60 lbs/hr.

Compliance with these limits, in conjunction with the potential to emit from the rest of the modification, will ensure that the emission increase from Significant Source Modification No. 029-35496-00005 is less than twenty-five (25) tons of PM per year, fifteen (15) tons of $PM_{10}$ per year, one hundred (100) tons of CO per year, and therefore will render the requirements of 326 IAC 2-2 (PSD) not applicable.

Compliance with these limits will ensure the net emissions increase from Significant Source Modification No. 029-35496-00005 is less than ten (10) tons of direct $PM_{2.5}$ per year, and therefore, will render the requirements of 326 IAC 2-2 (PSD) not applicable.

D.1.3 Emission Offset Minor Limit [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:

The VOC emissions from the DDG Dryer Operation (EU-39) shall not exceed 8.90 lbs/hr.

Compliance with this limit, in conjunction with the potential to emit from the rest of the modification, will ensure that the potential to emit from this modification is less than forty (40) tons of VOC per year, and therefore will render the requirements of 326 IAC 2-3 (Emission Offset) not applicable.

D.1.4 HAP Minor Limit [326 IAC 2-4.1]

In order to render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants) not applicable, the Permittee shall comply with the following:

(a) The Acetaldehyde emissions from the DDG Dryer Operation (EU-39) shall not exceed 1.91 lbs/hr.

(b) The Formaldehyde emissions from the DDG Dryer Operation (EU-39) shall not exceed 1.48 lbs/hr.

Compliance with these emission limits in conjunction with the potential to emit from the rest of the modification, will ensure that the potential to emit from Significant Source Modification No. 029-35496-00005 is less than ten (10) tons of single HAP per year and twenty-five (25) tons of total HAPs per year, and therefore will render the requirements of 326 IAC 2-4.1 not applicable.

D.1.5 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following emission units and control devices shall not exceed the pounds per hour limitation when operating at the stated process weight rates calculated using the following equations:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

or

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

| **Emission Unit (baghouse)** | **Unit Description** | **Process weight rate (tons per hour)** | **Allowable particulate emission rate (pounds per hour)** |
|---|---|---|---|
| EU-11 | grain receiving and Pneumatic Conveyor | 28.0 | 38.2 |
| EU-12 | Corn receiving and storage system | 446 | 67.6 |
| EU-13 | Grain Storage Bins | 224 | 59.7 |
| EU-14 | Hammermills and hopper | 54.9 | 45.4 |
| EU-32 | Rotary dryers | 25.5 | 35.9 |
| EU-32 | cooler | 9.56 | 18.6 |
| EU-34 | Storage silos and surge hoppers | 21.0 | 31.5 |
| EU-35 | Air transport system and scale to rail car loading area | 7.00 | 15.1 |
| EU-36 | Air transport system and scale to the truck loading area | 7.00 | 15.1 |
| EU-37 | Rail Loading | 7.00 | 15.1 |

D.1.6 PSD Minor Limit [326 IAC 2-2]

Pursuant to CP 029-6331-00005 issued March 14, 1997:

(a) The PM and $PM_{10}$ emissions from the corn truck unloading hopper, grain receiving elevator and conveyor, corn storage silo, and grain cleaner (collectively exhausting to stack S-111), which are part of EU-12, shall be limited to 1.20 pounds per hour.

(b) The PM and $PM_{10}$ emissions from the grain air transport system (exhausting to stack S-112), which is part of EU-12, shall be limited to 0.219 pounds per hour.

(c) The PM and $PM_{10}$ emissions from the two (2) storage silos and the two (2) surge hoppers (exhausting to stacks S-341 through S-344), collectively identified as EU-34, shall be limited to 0.136 pounds per hour.

(d) The PM and $PM_{10}$ emissions from one (1) air transport system and scale to the rail car loading area (exhausting to stack S-350), identified as EU-35, and the one (1) air transport system and scale to the truck loading area (exhausting to stack S-360), identified as EU-36, shall collectively be limited to 0.289 pounds per hour.

(e) The PM and $PM_{10}$ emissions from one (1) rail car loader (exhausting to stack S-370, identified as EU-37 and the truck loader (exhausting to stack S-380), identified as EU-38, shall be limited to 1.25 pounds per hour.

Compliance with these limitations shall render the requirements of 326 IAC 2-2, PSD, not applicable.

D.1.7 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2 (a)(Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the Transport System (EU-32), DDG Dryer (EU-39), and the wet cake storage pad (EU-40) shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

D.1.8 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.1.9 Particulate, VOC, CO, VOC, and HAP Control

(a) In order to ensure compliance with Conditions D.1.1, D.1.2, D.1.3, and D.1.4 the RTO for VOC, CO, VOC and HAP control shall be in operation and control emissions from the DDG Dryer EU-39 at all times the facility is in operation.

(b) In order to ensure compliance with Conditions D.1.2 and D.1.7, the wet scrubbers and cyclones for particulate control shall be in operation and control emissions from the Rotary Dryers and Transport System collectively identified as EU-32 and the DDG Dryer EU-39 at all times the facilities are in operation.

(c) In order to ensure compliance with Conditions D.1.5 and D.1.6, the baghouses for particulate control shall be in operation and control emissions from EU-12 and EU-34 through EU-36, at all times that the facilities are in operation.

D.1.10 Testing Requirements [326 IAC 2-1.1-11]

(a) Not later than 180 days after the startup of DDG Dryer EU-39, the Permittee shall perform PM, PM10, PM2.5, CO, and VOC testing of the DDG Dryer EU-39 utilizing methods approved by the commissioner at least once every 5 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. PM10 and PM2.5 includes filterable and condensable PM.

(b) Not later than 180 days after the startup of DDG Dryer EU-39, the Permittee shall perform PM, PM10, and PM2.5 testing of the Transport System EU-32 utilizing methods approved by the commissioner at least once every 5 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. PM10 and PM2.5 includes filterable and condensable PM.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)][40 CFR 64]**

D.1.11 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of EU-12 and EU-34 through EU-36 stack exhausts (S-111, S-112, S-341 through S-344, S-350, and S-360) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

Compliance with this requirement satisfies, in part, the requirements of 40 CFR 64 for EU-12.

D.1.12 Visible Emissions Notations

(a) Visible emission notations of the Transport System cyclone stack exhausts (S-310) and the cyclones (CE-39a) stack exhausts (S-320) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

D.1.13 Scrubber Flow Rate

(a) The Permittee shall monitor and record the flow rate of the scrubbers controlling the Rotary Dryers (EU-32) at least once per day when the associated processes are in operation. The Permittee shall maintain the flow rate at or above the minimum specified in the table below.

| Parameter | Scrubber #1 S-305 | Scrubber #2 S-306 | Scrubber #3 S-307 | Scrubber #4 S-308 | Scrubber #5 S-309 |
|---|---|---|---|---|---|
| Minimum flow rate measured at nozzles (gal/min) | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 |
| Minimum flow rate measured at trays (gal/min) | 10.0 | 10.0 | 7.0 | 7.0 | 7.0 |

(b) 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 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.

D.1.14 Parametric Monitoring - Wet Scrubbers

The Permittee shall monitor and record the pressure drop across the scrubbers controlling the Rotary Dryers (EU-32) at least once per day when the associated processes are in operation. When for any one reading, the pressure drop across a scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 0.5 and 6.5 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the 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.

D.1.15 RTO Temperature

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the RTO (CE-39b) for measuring operating temperature. For the purpose of this condition, continuous means no less often than once per fifteen (15) minutes. The output of this system shall be recorded as 3-hour average. From the date of startup until the stack test results are available, the Permittee shall operate the thermal oxidizer at or above the 3-hour average temperature of 1,400°F.

(b) The Permittee shall determine the 3-hour average temperature from the latest valid stack test that demonstrates compliance with limits in Conditions D.1.1, D.1.2, D.1.3, and D.1.4.

(c) On and after the date the stack test results are available, the Permittee shall operate the thermal oxidizer at or above the 3-hour average temperature as observed during the latest compliant stack test.

(d) If the 3-hour average temperature falls below the above mentioned 3-hour average temperature, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A 3-hour average temperature reading below the above mentioned 3-hour average temperature is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.1.16 Parametric Monitoring - RTO

(a) The Permittee shall determine the appropriate duct pressure or fan amperage from the latest valid stack test that demonstrates compliance with limits in Conditions D.1.1, D.1.2, D.1.3, and D.1.4.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. On and after the date the stack test results are available, the duct pressure or fan amperage shall be maintained within the normal range as established in latest compliant stack test.

(c) When, for any one reading, the duct pressure or fan amperage is outside the above mentioned range, the Permittee shall take a reasonable response. Section C - Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(d) 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.

D.1.17 Broken or Failed Bag Detection

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

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies

as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

D.1.18 Cyclone Failure Detection

In the event that a cyclone malfunction has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emission unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.1.19 Scrubber Failure Detection

In the event that a scrubber malfunction has been observed:

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

(b) For a scrubber controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

D.1.20 Record Keeping Requirements

(a) To Document the compliance status with Condition D.1.2(a), the Permittee shall maintain a monthly record of the total dryer feed rate for the Rotary Dryers (EU-32).

(b) To document the compliance status with Conditions D.1.11 and D.1.12, the Permittee shall maintain a daily record of visible emission notations of the baghouse and cyclone stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

(c) To document the compliance status with Conditions D.1.13 and D.1.14, the Permittee shall maintain daily records of the Flow Rate and Pressure Drop for the scrubber. 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).

(d) To document the compliance status with Condition D.1.15, the Permittee shall maintain continuous temperature records for the RTO (CE-39b) and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.

(e) To document the compliance status with Condition D.1.16, the Permittee shall maintain daily records of the duct pressure or fan amperage for the RTO (CE-39b). 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).

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

D.1.21 Reporting Requirements

A quarterly summary of the information to document the compliance status with D.1.2(a) shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require 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 FACILITY OPERATION CONDITIONS

**Emission Unit Description: Steam Boiler, identified as EU-96**

(dd) One (1) steam boiler, identified as EU-96, installed in 1977, using natural gas and exhausting to Stack S-906, heat input capacity: 244 million British thermal units per hour.
Under 40 CFR 63, Subpart DDDDD, this facility is an affected unit.

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

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

D.2.1 Particulate [326 IAC 6.5-3-8]

The steam boiler, identified as EU-96 (identified as Boiler 6), shall burn natural gas only.

Pursuant to 326 IAC 6.5-1-1(b), particulate limitations shall not be established for combustion units that burn only natural gas. Therefore, the limitations established in 326 IAC 6.5-3-8 for Boiler 6 shall not apply.

D.2.2 Particulate [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3 (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:

| EMISSION UNIT | UNIT ID | PT (LB/MMBTU) |
|---|---|---|
| Boiler | EU-96 | 0.80 |

## SECTION D.3 FACILITY OPERATION CONDITIONS

**Emission Unit Description: Steam Boiler EU-97**

(ee) One (1) natural gas fired steam boiler, identified as EU-97, using #2 fuel oil as back-up, installed in 1992, exhausting to Stack S-907, heat input capacity: 47.6 million British thermal units per hour using natural gas and 45.6 million British thermal units using #2 fuel oil. Under 40 CFR 60, Subpart Dc, this facility is considered an industrial, institutional, or commercial boiler.

Under 40 CFR 60, Subpart Dc, this facility is considered an industrial, institutional, or commercial boiler. Under 40 CFR 63, Subpart DDDDD, this facility is an affected unit.

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

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

D.3.1 Particulate [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:

| EMISSION UNIT | UNIT ID | PT (LB/MMBTU) |
|---|---|---|
| Boiler | EU-97 | 0.25 |

D.3.2 Fuel Oil Limit [326 IAC 2-2][326 IAC 7-1.1-2]

(a) Pursuant to CP 029-2159-00005, issued on February 10, 1992, the steam boiler, identified as EU-97, shall be limited to 1,848,000 gallons of No. 2 fuel oil per twelve (12) consecutive month period, with compliance determined at the end of each month, and no fuel shall be combusted than contains greater than 0.3% sulfur.

(b) The $SO_2$ emissions from the steam boiler, identified as EU-97, when combusting No. 2 fuel oil, shall not exceed 0.043 pounds of $SO_2$ per gallon of No. 2 fuel oil.

Compliance with these limitations shall limit the $SO_2$ emissions from the steam boiler, identified as EU-97, to 39.4 tons per year, and render the requirements of 326 IAC 2-2, PSD, not applicable. This will also satisfy the requirements of 326 IAC 7-1.1-2, Sulfur Dioxide Emissions Limitations.

D.3.3 Sulfur Dioxide Emissions Limitations [326 IAC 7-1.1-2]

Pursuant to 326 IAC 7-1.1-2(a)(3), the sulfur dioxide emissions from the steam boiler, identified as EU-97, shall not exceed five-tenths (0.5) pounds per MMBtu.

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

D.3.4 Visible Emissions Notations

(a) Visible emission notations of the steam boiler, identified as EU-97, stack exhaust (S-907) shall be performed once per day during normal daylight operations when burning No.2 fuel oil. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response step required by this condition. Failure to take response step 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.3.5 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.4, the Permittee shall maintain a daily record of visible emission notations of the steam boiler, identified as EU-97, stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the boiler did not operate that day).

(b) To document the compliance status with Conditions D.3.1 and D.3.2, the Permittee shall record and maintain records of the amounts of each fuel combusted during each day for the one (1) boiler, identified as EU-97.

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

D.3.6 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.3.2 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting Requirements contains the Permittee's obligation with regard to the reports required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35).

## SECTION D.4 FACILITY OPERATION CONDITIONS

**Emission Unit Description: Insignificant Activities**

(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 a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations [326 IAC 6-3-2].

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

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

D.4.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e), the particulate emissions from the grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations shall be limited by the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

## SECTION E.1 NSPS - 40 CFR Part 60, Subpart Dc

**Emissions Unit Description:**

(ee) One (1) natural gas fired steam boiler, identified as EU-97, using #2 fuel oil as back-up, installed in 1992, exhausting to Stack S-907, heat input capacity: 47.6 million British thermal units per hour using natural gas and 45.6 million British thermal units using #2 fuel oil.

Under 40 CFR 60, Subpart Dc, this facility is considered an industrial, institutional, or commercial boiler. Under 40 CFR 63, Subpart DDDDD, this facility is an affected unit.

(The information describing the process contained in this facility 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 units(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart Dc.

(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

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

E.1.2 Small Industrial-Commercial-Institutional Steam Generating Units NSPS [40 CFR Part 60, Subpart Dc][326 IAC 12]

Pursuant to 40 CFR Part 60, Subpart Dc, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart Dc, which are incorporated by reference as 326 IAC 12 (included as Attachment A of this permit) for the emission unit(s) listed above as specified as follows:

(1) 40 CFR 60.40c(a) through (d)
(2) 40 CFR 60.41c
(3) 40 CFR 60.42c(d) through (j)
(4) 40 CFR 60.43c(c) and (d)
(5) 40 CFR 60.44c(a) through (c), (e), (g) through (j)
(6) 40 CFR 60.45c(a)~~,~~ and (c)
(7) 40 CFR 60.46c(d) through (f)
(8) 40 CFR 60.47c(a), (b), (c) and (d)
(9) 40 CFR 60.48c(a) through (d), (e)(1) through (7), and (11), (f)(1), and (g) through (j)

**SECTION E.2 NESHAP - 40 CFR Part 63, Subpart ZZZZ**

**Emissions Unit Description: Reciprocating Internal Combustion Engine (RICE)**

(b) Emergency generators as follows: diesel generators not exceeding 1,600 horsepower.

(1) One (1) Diesel-fired emergency generator, with a maximum capacity of 1600 hp and installed in 1999. [326 IAC 2-2]

Under 40 CFR Part 63, Subpart ZZZZ, this generator is an affected unit.

(c) Other emergency equipment as follows: stationary fire pumps.

(1) One (1) Diesel-fired emergency fire water pump with a maximum capacity of 235 horsepower and installed in 1996. [326 IAC 2-2]

Under 40 CFR Part 63, Subpart ZZZZ, this generator is an affected unit.

(f) Activities associated with emergencies, including natural gas reciprocating engines not exceeding 16,000 horsepower.

(1) One (1) Natural gas-fired emergency generator, with a maximum capacity of 0.121 MMBtu/hr and installed in 2005. [326 IAC 2-2]

Under 40 CFR Part 63, Subpart ZZZZ, this generator is an affected unit.

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

**National Emissions Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]**

E.2.1 General Provisions Relating to National Emissions Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1][40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.6580, 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 as specified in 40 CFR Part 63, Subpart ZZZZ in accordance with the schedule in 40 CFR 63, Subpart ZZZZ.

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

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

E.2.2 National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ][326 IAC 20-82]

Pursuant to 40 CFR Part 63, Subpart ZZZZ, the Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment B to this permit) which are incorporated by reference as 326 IAC 20-82, for the emission unit(s) listed above, as specified as follows:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585(a),(b)
(3) 40 CFR 63.6590(a)(1)(i),(ii),(b)(3)
(4) 40 CFR 63.6595
(5) 40 CFR 63.6600(c)
(6) 40 CFR 63.6602
(7) 40 CFR 63.6604(b)
(8) 40 CFR 63.6605
(9) 40 CFR 63.6625(e)(2),(f),(h),(i),(j)
(10) 40 CFR 63.6640
(11) 40 CFR 63.6645(a)(5)
(12) 40 CFR 63.6650(h)
(13) 40 CFR 63.6655 except (c)
(14) 40 CFR 63.6670
(15) 40 CFR 63.6675
(16) Table 2c
(17) Table 6
(18) Table 8 except per 63.6645(a)(5) the following do not apply: 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h)

## SECTION E.3 NESHAP - 40 CFR Part 63, Subpart DDDDD

**Emissions Unit Description:**

(dd) One (1) steam boiler, identified as EU-96, installed in 1977, using natural gas and exhausting to Stack S-906, heat input capacity: 244 million British thermal units per hour.

Under 40 CFR 63, Subpart DDDDD, this facility is an affected unit.

(ee) One (1) natural gas fired steam boiler, identified as EU-97, using #2 fuel oil as back-up, installed in 1992, exhausting to Stack S-907, heat input capacity: 47.6 million British thermal units per hour using natural gas and 45.6 million British thermal units using #2 fuel oil.

Under 40 CFR 60, Subpart Dc, this facility is considered an industrial, institutional, or commercial boiler. Under 40 CFR 63, Subpart DDDDD, this facility is an affected unit.

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

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]**

E.3.1 General Provision Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1][40 CFR Part 63, Subpart A]

Pursuant to 40 CFR 63.7565, 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, as specified in 40 CFR Part 63, Subpart DDDDD, in accordance with the schedule in 40 CFR Part 63, Subpart DDDDD.

E.3.2 National Emission Standards for Hazardous Air Pollutants (NESHAP) for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters [326 IAC 20-95][40 CFR 63 Subpart DDDDD]

Pursuant to 40 CFR 63 Subpart DDDDD, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart DDDDD, which are incorporated by reference at 326 IAC 20-95 (included as Attachment C of this permit) for the emission unit(s) listed above**,** as specified as follows:

(1) 63.7480
(2) 63.7485
(3) 63.7490 (a)(1), (d)
(4) 63.7495 (b). (d)
(5) 63.7499 (l). (m)
(6) 63.7500 (a)(1)
(7) 63.7505 (a), (h)
(8) 63.7540 (a)(10), (c)(13)
(9) 63.7545
(10) 63.7550
(11) 63.7555
(12) 63.7560
(13) 63.7565
(14) 63.7570
(15) 63.7575
(16) Table 2
(17) Table 3

(18) Table 9
(19) Table 10

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
# OFFICE OF AIR QUALITY
# COMPLIANCE AND ENFORCEMENT BRANCH
# PART 70 OPERATING PERMIT
# CERTIFICATION

Source Name: MGPI of Indiana
Source Address: 7 Ridge Avenue, Lawrenceburg, Indiana 47025
Part 70 Permit No.: T029-32119-00005

**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: MGPI of Indiana
Source Address: 7 Ridge Avenue, Lawrenceburg, Indiana 47025
Part 70 Permit No.: T029-32119-00005

**This form consists of 2 pages** **Page 1 of 2**

☐ This is an emergency as defined in 326 IAC 2-7-1(12)

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

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

| |
|---|
| Facility/Equipment/Operation: |
| Control Equipment: |
| Permit Condition or Operation Limitation in Permit: |
| Description of the Emergency: |
| Describe the cause of the Emergency: |

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

**Page 2 of 2**

| |
|---|
| Date/Time Emergency started: |
| Date/Time Emergency was corrected: |
| Was the facility being properly operated at the time of the emergency? Y N |
| Type of Pollutants Emitted: TSP, PM-10, $SO_2$, VOC, $NO_X$, CO, Pb, other: |
| Estimated amount of pollutant(s) emitted during emergency: |
| Describe the steps taken to mitigate the problem: |
| Describe the corrective actions/response steps taken: |
| Describe the measures taken to minimize emissions: |
| If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value: |

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

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

## Part 70 Quarterly Report

Source Name: MGPI of Indiana
Source Address: 7 Ridge Avenue, Lawrenceburg, Indiana 47025
Part 70 Permit No.: T029-32119-00005
Facility: Five (5) Rotary Dryers (EU-32)
Parameter: total dryer feed rate
Limit: shall not exceed 147,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER : YEAR:

| Month | Column 1 | Column 2 | Column 1 + Column 2 |
|---|---|---|---|
| | This Month | Previous 11 Months | 12 Month Total |
| Month 1 | | | |
| Month 2 | | | |
| Month 3 | | | |

☐ 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: MGPI of Indiana
Source Address: 7 Ridge Avenue, Lawrenceburg, Indiana 47025
Part 70 Permit No.: T029-32119-00005
Facility: One (1) steam boiler, identified as EU-97
Parameter: #2 Fuel Oil Burned
Limit: 1,848,000 gallons per twelve (12) consecutive month period, equivalent to $SO_2$ emissions of 39.4 tons per year, with compliance determined at the end of each month.

YEAR: _____

| Month | #2 Fuel Oil (gallons) | #2 Fuel Oil (gallons) | # 2 Fuel Oil (gallons) |
|---|---|---|---|
| | This Month | Previous 11 Months | 12 Month Total |
| | | | |
| | | | |
| | | | |

☐ 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 OPERATING PERMIT
# QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: MGPI of Indiana
Source Address: 7 Ridge Avenue, Lawrenceburg, Indiana 47025
Part 70 Permit No.: T029-32119-00005

**Months: _____to _____ Year:_____**

Page 1 of 2

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

| | |
|---|---|
| **Permit Requirement** (specify permit condition #) | |
| **Date of Deviation:** | **Duration of Deviation:** |
| **Number of Deviations:** | |
| **Probable Cause of Deviation:** | |
| **Response Steps Taken:** | |

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|---|---|
| **Permit Requirement** (specify permit condition #) | |
| **Date of Deviation:** | **Duration of Deviation:** |
| **Number of Deviations:** | |
| **Probable Cause of Deviation:** | |
| **Response Steps Taken:** | |

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|---|---|
| **Permit Requirement** (specify permit condition #) | |
| **Date of Deviation:** | **Duration of Deviation:** |
| **Number of Deviations:** | |
| **Probable Cause of Deviation:** | |
| **Response Steps Taken:** | |
| **Permit Requirement** (specify permit condition #) | |
| **Date of Deviation:** | **Duration of Deviation:** |
| **Number of Deviations:** | |
| **Probable Cause of Deviation:** | |
| **Response Steps Taken:** | |
| **Permit Requirement** (specify permit condition #) | |
| **Date of Deviation:** | **Duration of Deviation:** |
| **Number of Deviations:** | |
| **Probable Cause of Deviation:** | |
| **Response Steps Taken:** | |

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

**Attachment A**
**Part 70 Operating Permit Renewal T029-32119-00005**

[Downloaded from the eCFR on May 13, 2013]

**Electronic Code of Federal Regulations**

**Title 40: Protection of Environment**

**Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**

Source: 72 FR 32759, June 13, 2007, unless otherwise noted.

**§ 60.40c Applicability and delegation of authority.**

(a) Except as provided in paragraphs (d), (e), (f), and (g) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, § 60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide ($SO_2$ ) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§ 60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in § 60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under § 60.14.

(e) Affected facilities ( *i.e.* heat recovery steam generators and fuel heaters) that are associated with stationary combustion turbines and meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators, fuel heaters, and other affected facilities that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/h) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/h) heat input of fossil fuel. If the heat recovery steam generator, fuel heater, or other affected facility is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The stationary combustion turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(f) Any affected facility that meets the applicability requirements of and is subject to subpart AAAA or subpart CCCC of this part is not subject to this subpart.

(g) Any facility that meets the applicability requirements and is subject to an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not subject to this subpart.

(h) Affected facilities that also meet the applicability requirements under subpart J or subpart Ja of this part are subject to the PM and $NO_X$ standards under this subpart and the $SO_2$ standards under subpart J or subpart Ja of this part, as applicable.

(i) Temporary boilers are not subject to this subpart.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9461, Feb. 16, 2012]

**§ 60.41c Definitions.**

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

*Annual capacity factor* means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

*Coal* means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see § 60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal not meeting the definition of natural gas, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

*Coal refuse* means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

*Combined cycle system* means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

*Combustion research* means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit ( *i.e.* , the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

*Conventional technology* means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

*Distillate oil* means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see § 60.17), diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see § 60.17), kerosine, as defined by the American Society of Testing and Materials in ASTM D3699 (incorporated by reference, see § 60.17), biodiesel as defined by the American Society of Testing and Materials in ASTM D6751 (incorporated by reference, see § 60.17), or biodiesel blends as defined by the American Society of Testing and Materials in ASTM D7467 (incorporated by reference, see § 60.17).

*Dry flue gas desulfurization technology* means a $SO_2$ control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

*Duct burner* means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

*Emerging technology* means any $SO_2$ control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under § 60.48c(a)(4).

*Federally enforceable* means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

*Fluidized bed combustion technology* means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

*Fuel pretreatment* means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

*Heat input* means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

*Heat transfer medium* means any material that is used to transfer heat from one point to another point.

*Maximum design heat input capacity* means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

*Natural gas* means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see § 60.17); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

*Noncontinental area* means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

*Oil* means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

*Potential sulfur dioxide emission rate* means the theoretical $SO_2$ emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

*Process heater* means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

*Residual oil* means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see § 60.17).

*Steam generating unit* means a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

*Steam generating unit operating day* means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

*Temporary boiler* means a steam generating unit that combusts natural gas or distillate oil with a potential $SO_2$ emissions rate no greater than 26 ng/J (0.060 lb/MMBtu), and the unit is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A steam generating unit is not a temporary boiler if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The steam generating unit or a replacement remains at a location for more than 180 consecutive days. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another in an attempt to circumvent the residence time requirements of this definition.

*Wet flue gas desulfurization technology* means an $SO_2$ control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

*Wet scrubber system* means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or $SO_2$ .

*Wood* means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9461, Feb. 16, 2012]

**§ 60.42c Standard for sulfur dioxide (SO2 ).**

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the performance test is completed or required to be completed under § 60.8, whichever date comes first, the owner or operator of an affected facility that combusts only coal shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain $SO_2$ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential $SO_2$ emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain $SO_2$ in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain $SO_2$ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential $SO_2$ emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain $SO_2$ in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.

(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the performance test is completed or required to be completed under § 60.8, whichever date comes first, the owner or operator of an affected facility that:

(1) Combusts only coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential $SO_2$ emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of $SO_2$ in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is fired with coal refuse, the affected facility subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 87 ng/J (0.20 lb/MMBtu) heat input $SO_2$ emissions limit or the 90 percent $SO_2$ reduction requirement specified in paragraph (a) of this section and the emission limit is determined pursuant to paragraph (e)(2) of this section.

(2) Combusts only coal and that uses an emerging technology for the control of $SO_2$ emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of 50 percent (0.50) of the potential $SO_2$ emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of 260 ng/J (0.60 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent $SO_2$ reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under paragraphs (c)(1), (2), (3), or (4).

(1) Affected facilities that have a heat input capacity of 22 MW (75 MMBtu/h) or less;

(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.

(3) Affected facilities located in a noncontinental area; or

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from exhaust gases entering the duct burner.

(d) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of 215 ng/J (0.50 lb/MMBtu) heat input from oil; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(e) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of the following:

(1) The percent of potential $SO_2$ emission rate or numerical $SO_2$ emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that

(i) Combusts coal in combination with any other fuel;

(ii) Has a heat input capacity greater than 22 MW (75 MMBtu/h); and

(iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s = \frac{(K_a H_a + K_b H_b + K_c H_c)}{(H_a + H_b + H_c)}$$

Where:

$E_s$ = $SO_2$ emission limit, expressed in ng/J or lb/MMBtu heat input;

$K_a$ = 520 ng/J (1.2 lb/MMBtu);

$K_b$ = 260 ng/J (0.60 lb/MMBtu);

$K_c$ = 215 ng/J (0.50 lb/MMBtu);

$H_a$ = Heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [MMBtu];

$H_b$ = Heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (MMBtu); and

$H_c$ = Heat input from the combustion of oil, in J (MMBtu).

(f) Reduction in the potential $SO_2$ emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

(1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential $SO_2$ emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion $SO_2$ control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), (3), or (4) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under § 60.48c(f), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).

(2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(3) Coal-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).

(4) Other fuels-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).

(i) The $SO_2$ emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) For affected facilities located in noncontinental areas and affected facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this

section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9462, Feb. 16, 2012]

**§ 60.43c Standard for particulate matter (PM).**

(a) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

(2) 130 ng/J (0.30 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph (c).

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

(e)(1) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) of this section.

(2) As an alternative to meeting the requirements of paragraph (e)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) An owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under § 60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or $SO_2$ emissions is not subject to the PM limit in this section.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 77 FR 9462, Feb. 16, 2012]

**§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.**

(a) Except as provided in paragraphs (g) and (h) of this section and § 60.8(b), performance tests required under § 60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in § 60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under § 60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and $SO_2$ emission limits under § 60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affect facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) of this section and § 60.8, compliance with the percent reduction requirements and $SO_2$ emission limits under § 60.42c is based on the average percent reduction and the average $SO_2$ emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and $SO_2$ emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 of appendix A of this part are used to determine the hourly $SO_2$ emission rate ($E_{ho}$ ) and the 30-day average $SO_2$ emission rate ($E_{ao}$ ). The hourly averages used to compute the 30-day averages are obtained from the CEMS. Method 19 of appendix A of this part shall be used to calculate $E_{ao}$ when using daily fuel sampling or Method 6B of appendix A of this part.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted $E_{ho}$ ($E_{ho}$ o) is used in Equation 19-19 of Method 19 of appendix A of this part to compute the adjusted $E_{ao}$ ($E_{ao}$ o). The $E_{ho}$ o is computed using the following formula:

$$E_{ho}o = \frac{E_{ho} - E_w(1 - X_j)}{X_j}$$

Where:

$E_{ho}$ o = Adjusted $E_{ho}$ , ng/J (lb/MMBtu);

$E_{ho}$ = Hourly $SO_2$ emission rate, ng/J (lb/MMBtu);

$E_w$ = $SO_2$ concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value $E_w$ for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure $E_w$ if the owner or operator elects to assume $E_w$ = 0.

$X_k$ = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(2) The owner or operator of an affected facility that qualifies under the provisions of § 60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters $E_w$ or $X_k$ if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under § 60.42c(a) or (b) shall determine compliance with the $SO_2$ emission limits under § 60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential $SO_2$ emission rate is computed using the following formula:

$$\%P_s = 100\left(1 - \frac{\%R_g}{100}\right)\left(1 - \frac{\%R_f}{100}\right)$$

Where:

$\%P_s$ = Potential $SO_2$ emission rate, in percent;

$\%R_g$ = $SO_2$ removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

$\%R_f$ = $SO_2$ removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the $\%P_s$ , an adjusted $\%R_g$ ($\%R_g$ o) is computed from $E_{ao}$ o from paragraph (e)(1) of this section and an adjusted average $SO_2$ inlet rate ($E_{ai}$ o) using the following formula:

$$\%R_g o = 100\left(1 - \frac{E^{\circ}_{ao}}{E^{\circ}_{ai}}\right)$$

Where:

$\%R_g$ o = Adjusted $\%R_g$ , in percent;

$E_{ao}$ o = Adjusted $E_{ao}$ , ng/J (lb/MMBtu); and

$E_{ai}$ o = Adjusted average $SO_2$ inlet rate, ng/J (lb/MMBtu).

(ii) To compute $E_{ai}$ o, an adjusted hourly $SO_2$ inlet rate ($E_{hi}$ o) is used. The $E_{hi}$ o is computed using the following formula:

$$E_{hi}o = \frac{E_{hi} - E_w(1 - X_k)}{X_k}$$

Where:

$E_{hi}$ o = Adjusted $E_{hi}$ , ng/J (lb/MMBtu);

$E_{hi}$ = Hourly $SO_2$ inlet rate, ng/J (lb/MMBtu);

$E_w$ = $SO_2$ concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value $E_w$ for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure $E_w$ if the owner or operator elects to assume $E_w$ = 0; and

$X_k$ = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under § 60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under § 60.46c(d)(2).

(h) For affected facilities subject to § 60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the $SO_2$ standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in § 60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the $SO_2$ standards under § 60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid $SO_2$ emissions data in calculating $\%P_s$ and $E_{ho}$ under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under § 60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$ or $E_{ho}$ pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

**§ 60.45c Compliance and performance test methods and procedures for particulate matter.**

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under § 60.43c shall conduct an initial performance test as required under § 60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of this section.

(1) Method 1 of appendix A of this part shall be used to select the sampling site and the number of traverse sampling points.

(2) Method 3A or 3B of appendix A-2 of this part shall be used for gas analysis when applying Method 5 or 5B of appendix A-3 of this part or 17 of appendix A-6 of this part.

(3) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 of appendix A of this part may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 8.1 and 11.1 of Method 5B of appendix A of this part may be used in Method 17 of appendix A of this part only if Method 17 of appendix A of this part is used in conjunction with a wet scrubber system. Method 17 of appendix A of this part shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(5) For Method 5 or 5B of appendix A of this part, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 ±14 °C (320±25 °F).

(6) For determination of PM emissions, an oxygen ($O_2$ ) or carbon dioxide ($CO_2$ ) measurement shall be obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(7) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rates expressed in ng/J (lb/MMBtu) heat input shall be determined using:

(i) The $O_2$ or $CO_2$ measurements and PM measurements obtained under this section, (ii) The dry basis F factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(8) Method 9 of appendix A-4 of this part shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under § 60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(c) In place of PM testing with Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(14) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with § 60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under § 60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under § 60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraph (c)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (c)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under § 60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (c)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and $O_2$ (or $CO_2$ ) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.

(i) For PM, Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall be used; and

(ii) For O2 (or $CO_2$ ), Method 3A or 3B of appendix A-2 of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.

(14) As of January 1, 2012, and within 90 days after the date of completing each performance test, as defined in § 60.8, conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit ( *i.e.,* reference method) data and performance test ( *i.e.,* compliance test) data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/ert tool.html/* ) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

(d) The owner or operator of an affected facility seeking to demonstrate compliance under § 60.43c(e)(4) shall follow the applicable procedures under § 60.48c(f). For residual oil-fired affected facilities, fuel supplier certifications are only allowed for facilities with heat input capacities between 2.9 and 8.7 MW (10 to 30 MMBtu/h).

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011; 77 FR 9463, Feb. 16, 2012]

**§ 60.46c Emission monitoring for sulfur dioxide.**

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the $SO_2$ emission limits under § 60.42c shall install, calibrate, maintain, and operate a CEMS for measuring $SO_2$ concentrations and either $O_2$ or $CO_2$ concentrations at the outlet of the $SO_2$ control device (or the outlet of the steam generating unit if no $SO_2$ control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under § 60.42c shall measure $SO_2$ concentrations and either $O_2$ or $CO_2$ concentrations at both the inlet and outlet of the $SO_2$ control device.

(b) The 1-hour average $SO_2$ emission rates measured by a CEMS shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under § 60.42c. Each 1-hour average $SO_2$ emission rate must be based on at least 30 minutes of operation, and shall be calculated using the data points required under § 60.13(h)(2). Hourly $SO_2$ emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under § 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities subject to the percent reduction requirements under § 60.42c, the span value of the $SO_2$ CEMS at the inlet to the $SO_2$ control device shall be 125 percent of the maximum estimated hourly potential $SO_2$ emission rate of the fuel combusted, and the span value of the $SO_2$ CEMS at the outlet from the $SO_2$ control device shall be 50 percent of the maximum estimated hourly potential $SO_2$ emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of § 60.42c, the span value of the $SO_2$ CEMS at the outlet from the $SO_2$ control device (or outlet of the steam generating unit if no $SO_2$ control device is used) shall be 125 percent of the maximum estimated hourly potential $SO_2$ emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the $SO_2$ control device (or outlet of the steam generating unit if no $SO_2$ control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average $SO_2$ emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the $SO_2$ control device (or outlet of the steam generating unit if no $SO_2$ control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average $SO_2$ emission rate by using Method 6B of appendix A of this part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according the Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average $SO_2$ input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when

calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B of appendix A of this part may be used in lieu of CEMS to measure $SO_2$ at the inlet or outlet of the $SO_2$ control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable $SO_2$ and $CO_2$ measurement train operated at the candidate location and a second similar train operated according to the procedures in § 3.2 and the applicable procedures in section 7 of Performance Specification 2 of appendix B of this part. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to § 60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the $SO_2$ standards based on fuel supplier certification, as described under § 60.48c(f), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

**§ 60.47c Emission monitoring for particulate matter.**

(a) Except as provided in paragraphs (c), (d), (e), and (f) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under § 60.43c shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard in § 60.43c(c) that is not required to use a COMS due to paragraphs (c), (d), (e), or (f) of this section that elects not to use a COMS shall conduct a performance test using Method 9 of appendix A-4 of this part and the procedures in § 60.11 to demonstrate compliance with the applicable limit in § 60.43c by April 29, 2011, within 45 days of stopping use of an existing COMS, or within 180 days after initial startup of the facility, whichever is later, and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. The observation period for Method 9 of appendix A-4 of this part performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.

(1) Except as provided in paragraph (a)(2) and (a)(3) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A-4 of this part performance tests using the procedures in paragraph (a) of this section according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, as determined by the most recent Method 9 of appendix A-4 of this part performance test results.

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 3 calendar months from

the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.

(2) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 of this part performance tests, elect to perform subsequent monitoring using Method 22 of appendix A-7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A-7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period ( *i.e.* , 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period ( *i.e.,* 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation ( *i.e.,* 90 seconds) or conduct a new Method 9 of appendix A-4 of this part performance test using the procedures in paragraph (a) of this section within 45 calendar days according to the requirements in § 60.45c(a)(8).

(ii) If no visible emissions are observed for 10 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS “Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems.” This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

(b) All COMS shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Owners and operators of an affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.060 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO2 or PM emissions and that are subject to an opacity standard in § 60.43c(c) are not required to operate a COMS if they follow the applicable procedures in § 60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS must calibrate, maintain, operate, and record the output of the system for PM emissions discharged to the atmosphere as specified in § 60.45c(c). The CEMS specified in paragraph § 60.45c(c) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(e) Owners and operators of an affected facility that is subject to an opacity standard in § 60.43c(c) and that does not use post-combustion technology (except a wet scrubber) for reducing PM, $SO_2$ , or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur, and is operated such that emissions of CO discharged to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS.

Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section; or

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in § 60.58b(i)(3) of subpart Eb of this part.

(ii) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(iii) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in § 60.13(h)(2).

(iv) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(2) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(3) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(4) You must record the CO measurements and calculations performed according to paragraph (e) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(f) An owner or operator of an affected facility that is subject to an opacity standard in § 60.43c(c) is not required to operate a COMS provided that the affected facility meets the conditions in either paragraphs (f)(1), (2), or (3) of this section.

(1) The affected facility uses a fabric filter (baghouse) as the primary PM control device and, the owner or operator operates a bag leak detection system to monitor the performance of the fabric filter according to the requirements in section § 60.48Da of this part.

(2) The affected facility uses an ESP as the primary PM control device, and the owner or operator uses an ESP predictive model to monitor the performance of the ESP developed in accordance and operated according to the requirements in section § 60.48Da of this part.

(3) The affected facility burns only gaseous fuels and/or fuel oils that contain no greater than 0.5 weight percent sulfur, and the owner or operator operates the unit according to a written site-specific monitoring plan approved by the permitting authority. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard. For testing performed as part of this site-specific monitoring plan, the permitting authority may require as an alternative to the notification and reporting requirements specified in §§ 60.8 and 60.11 that the owner or operator submit any deviations with the excess emissions report required under § 60.48c(c).

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**§ 60.48c Reporting and recordkeeping requirements.**

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by § 60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under § 60.42c, or § 60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling $SO_2$ emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of § 60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the $SO_2$ emission limits of § 60.42c, or the PM or opacity limits of § 60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) In addition to the applicable requirements in § 60.7, the owner or operator of an affected facility subject to the opacity limits in § 60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in paragraphs (c)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(2)(i) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator

(d) The owner or operator of each affected facility subject to the $SO_2$ emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.42c shall submit reports to the Administrator.

(e) The owner or operator of each affected facility subject to the $SO_2$ emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average $SO_2$ emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential $SO_2$ emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.

(4) Identification of any steam generating unit operating days for which $SO_2$ or diluent ($O_2$ or $CO_2$ ) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in § 60.41c; and

(iii) The sulfur content or maximum sulfur content of the oil.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate or maximum potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in § 60.48c(f) to demonstrate compliance with the $SO_2$ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in § 60.42C to use fuel certification to demonstrate compliance with the $SO_2$ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

(h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under § 60.42c or § 60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

**Attachment B**

**Part 70 Operating Permit No: T029-32119-00005**

[Downloaded from the eCFR on July 23, 2014]

**Electronic Code of Federal Regulations**

**Title 40: Protection of Environment**

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

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

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

**What This Subpart Covers**

**§63.6580 What is the purpose of subpart ZZZZ?**

Subpart 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).

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008; 78 FR 6700, Jan. 30, 2013]

**§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.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010; 78 FR 6700, Jan. 30, 2013]

**§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.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 78 FR 6701, Jan. 30, 2013]

**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.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

**§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.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

**§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 of this subpart as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in §63.6675 of this subpart, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6701, Jan. 30, 2013]

**§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.

[75 FR 9675, Mar. 3, 2010, as amended at 78 FR 6702, Jan. 30, 2013]

**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.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

**§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.

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

**§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:

$$F_o = \frac{0.209\ F_d}{F_c} \quad (Eq.\ 2)$$

Where:

$F_o$ = Fuel factor based on the ratio of oxygen volume to the ultimate $CO_2$ volume produced by the fuel at zero percent excess air.

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

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

$F_c$ = Ratio of the volume of $CO_2$ produced to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/106 Btu)

(ii) Calculate the $CO_2$ correction factor for correcting measurement data to 15 percent $O_2$, as follows:

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

Where:

$X_{CO2}$ = $CO_2$ correction factor, percent.

5.9 = 20.9 percent $O_2$—15 percent $O_2$, the defined $O_2$ correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent $O_2$ using $CO_2$ as follows:

$$C_{adj} = C_d \frac{X_{CO2}}{\%CO_2} \quad (Eq. 4)$$

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.

$X_{CO2}$ = $CO_2$ 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.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010; 78 FR 6702, Jan. 30, 2013]

**§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 $O_2$ or $CO_2$ according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

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

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR

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

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

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent $CO_2$ concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

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

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

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

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

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;

(4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;

(5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.

(7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet §63.6603(c) do not have to meet the requirements of this paragraph (g).

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6703, Jan. 30, 2013]

**§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 $O_2$ using one of the $O_2$ measurement methods specified in Table 4 of this subpart. Measurements to determine $O_2$ 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 $O_2$ emissions simultaneously at the inlet and outlet of the control device.

[69 FR 33506, June 15, 2004, as amended at 78 FR 6704, Jan. 30, 2013]

**Continuous Compliance Requirements**

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

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

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

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

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

**§63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?**

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

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

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure $O_2$ using one of the $O_2$ measurement methods specified in Table 4 of this subpart. Measurements to determine $O_2$ 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 $O_2$ emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

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

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the

engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6704, Jan. 30, 2013]

**Notifications, Reports, and Records**

**§63.6645 What notifications must I submit and when?**

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

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

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

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

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

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

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

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

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

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

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in §63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in §63.6603(d) and identifying the state or local regulation that the engine is subject to.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6705, Jan. 30, 2013]

**§63.6650 What reports must I submit and when?**

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

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

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

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

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

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

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

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

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

(1) Company name and address.

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

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

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

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

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

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

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

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

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

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

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

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

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

(iii) Engine site rating and model year.

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

(v) Hours operated for the purposes specified in §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §63.13.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010; 78 FR 6705, Jan. 30, 2013]

**§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.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 78 FR 6706, Jan. 30, 2013]

**§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).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

**Other Requirements and Information**

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

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

site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

**§63.6670 Who implements and enforces this subpart?**

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

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

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

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

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

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

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

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

**§63.6675 What definitions apply to this subpart?**

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

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

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

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

*Backup power for renewable energy* means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see §63.14).

*Black start engine* means an engine whose only purpose is to start up a combustion turbine.

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

*Commercial emergency stationary RICE* means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

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

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

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

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

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

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

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

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

*Diesel fuel* means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (*e.g.* biodiesel) that is suitable for use in compression ignition engines.

*Digester gas* means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and $CO_2$.

*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 $CO_2$.

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

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

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

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

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

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

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

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

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

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

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

*Non-selective catalytic reduction (NSCR)* means an add-on catalytic nitrogen oxides ($NO_X$) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, $NO_X$, CO, and volatile organic compounds (VOC) into $CO_2$, 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 $C_3H_8$.

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

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

*Spark ignition* means relating to either: A gasoline-fueled engine; or any other type of engine 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.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011; 78 FR 6706, Jan. 30, 2013]

**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:

| For each . . . | You must meet the following emission limitation, except during periods of startup . . . | During periods of startup you must . . . |
|---|---|---|
| 1. 4SRB stationary RICE | a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or | 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] |
| | b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$ | |

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

**Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions**

As stated in §§63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

| For each . . . | You must meet the following operating limitation, except during periods of startup . . . |
|---|---|
| 1. existing, new and reconstructed 4SRB stationary RICE >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<br>existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$ and using NSCR; | 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<br>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] |
| 2. existing, new and reconstructed 4SRB stationary RICE >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 | Comply with any operating limitations approved by the Administrator. |
| existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$ and not using NSCR. | |

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6706, Jan. 30, 2013]

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

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

| For each . . . | You must meet the following emission limitation, except during periods of startup . . . | During periods of startup you must . . . |
|---|---|---|
| 1. 2SLB stationary RICE | a. Reduce CO emissions by 58 percent or more; or<br>b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent $O_2$. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent $O_2$ until June 15, 2007 | 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] |
| 2. 4SLB stationary RICE | a. Reduce CO emissions by 93 percent or more; or | |
| | b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent $O_2$ | |

| For each . . . | You must meet the following emission limitation, except during periods of startup . . . | During periods of startup you must . . . |
|---|---|---|
| 3. CI stationary RICE | a. Reduce CO emissions by 70 percent or more; or | |
| | b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent $O_2$ | |

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

**Table 2b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP**

As stated in §§63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; and existing CI stationary RICE >500 HP:

| For each . . . | You must meet the following operating limitation, except during periods of startup . . . |
|---|---|
| 1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions 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 using an oxidation catalyst. | a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and<br>b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1] |
| 2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst | a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and |
| | b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1] |
| 3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and | Comply with any operating limitations approved by the Administrator. |
| New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and | |

| For each . . . | You must meet the following operating limitation, except during periods of startup . . . |
|---|---|
| existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst. | |

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6707, Jan. 30, 2013]

**Table 2c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions**

As stated in §§63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

| For each . . . | You must meet the following requirement, except during periods of startup . . . | During periods of startup you must . . . |
|---|---|---|
| 1. Emergency stationary CI RICE and black start stationary CI RICE[1] | a. Change oil and filter every 500 hours of operation or annually, whichever comes first.[2]<br>b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;<br>c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3] | Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[3] |
| 2. Non-Emergency, non-black start stationary CI RICE <100 HP | a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first.[2]<br>b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;<br>c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3] | |
| 3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP | Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent $O_2$. | |

| For each . . . | You must meet the following requirement, except during periods of startup . . . | During periods of startup you must . . . |
|---|---|---|
| 4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500 | a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent $O_2$; or<br>b. Reduce CO emissions by 70 percent or more. | |
| 5. Non-Emergency, non-black start stationary CI RICE >500 HP | a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent $O_2$; or<br>b. Reduce CO emissions by 70 percent or more. | |
| 6. Emergency stationary SI RICE and black start stationary SI RICE.[1] | a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[2]<br>b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;<br>c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3] | |
| 7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE | a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[2]<br>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] | |
| 8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP | a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[2]<br>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] | |

| For each . . . | You must meet the following requirement, except during periods of startup . . . | During periods of startup you must . . . |
|---|---|---|
| 9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500 | Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent $O_2$. | |
| 10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500 | Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent $O_2$. | |
| 11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500 | Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent $O_2$. | |
| 12. Non-emergency, non-black start stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis | Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent $O_2$. | |

[1]If 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.

[2]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 2c of this subpart.

[3]Sources 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:

| For each . . . | You must meet the following requirement, except during periods of startup . . . | During periods of startup you must . . . |
|---|---|---|
| 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]<br>b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;<br>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. | |

| For each . . . | You must meet the following requirement, except during periods of startup . . . | During periods of startup you must . . . |
|---|---|---|
| 5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year.[2] | 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. | |
| 6. Non-emergency, non-black start 2SLB stationary RICE | a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[1] | |
| | b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and | |
| | c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary. | |
| 7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP | a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1] | |
| | b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and | |
| | c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary. | |
| 8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP | a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1] | |
| | b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and | |

| 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 2,160 hours of operation or annually, whichever comes first, and replace as necessary. | |
| 9. Non-emergency, non-black start 4SLB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year | Install an oxidation catalyst to reduce HAP emissions from the stationary RICE. | |
| 10. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP | a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1] | |
| | b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and | |
| | c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary. | |
| 11. Non-emergency, non-black start 4SRB remote stationary RICE >500 HP | a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1] | |
| | b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and | |
| | c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary. | |
| 12. Non-emergency, non-black start 4SRB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year | Install NSCR to reduce HAP emissions from the stationary RICE. | |
| 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 | a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]<br>b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and | |

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

| For each . . . | Complying with the requirement to . . . | You must . . . | Using . . . | According to the following requirements . . . |
|---|---|---|---|---|
| 1. 2SLB, 4SLB, and CI stationary RICE | a. reduce CO emissions | i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and | | (a) For CO and $O_2$ 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-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. |
| | | ii. Measure the $O_2$ at the inlet and outlet of the control device; and | (1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[ac] (heated probe not necessary) | (b) Measurements to determine $O_2$ must be made at the same time as the measurements for CO concentration. |
| | | iii. Measure the CO at the inlet and the outlet of the control device | (1) ASTM D6522-00 (Reapproved 2005)[abc] (heated probe not necessary) or Method 10 of 40 CFR part 60, appendix A-4 | (c) The CO concentration must be at 15 percent $O_2$, dry basis. |

| For each . . . | Complying with the requirement to . . . | You must . . . | Using . . . | According to the following requirements . . . |
|---|---|---|---|---|
| 2. 4SRB stationary RICE | a. reduce formaldehyde emissions | i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and | | (a) For formaldehyde, $O_2$, 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. |
| | | ii. Measure $O_2$ at the inlet and outlet of the control device; and | (1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[a] (heated probe not necessary) | (a) Measurements to determine $O_2$ concentration must be made at the same time as the measurements for formaldehyde or THC concentration. |
| | | iii. Measure moisture content at the inlet and outlet of the control device; and | (1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03[a] | (a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration. |
| | | iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formalde-hyde at the inlet and the outlet of the control device | (1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03[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. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device | (1) Method 25A, reported as propane, of 40 CFR part 60, appendix A-7 | (a) THC concentration must be at 15 percent $O_2$, dry basis. Results of this test consist of the average of the three 1-hour or longer runs. |

| For each . . . | Complying with the requirement to . . . | You must . . . | Using . . . | According to the following requirements . . . |
|---|---|---|---|---|
| 3. Stationary RICE | a. limit the concentra-tion of formalde-hyde 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 station-ary 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 formalde-hyde at the exhaust of the station-ary 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 station-ary RICE | (1) Method 10 of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (2005)[ac], 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. |

[a]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.

[b]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:

| For each . . . | Complying with the requirement to . . . | You have demonstrated initial compliance if . . . |
|---|---|---|
| 1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP | a. Reduce CO emissions and using oxidation catalyst, and using a CPMS | i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and<br>ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and<br>iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test. |
| 2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP | a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS | 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. |
| 3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP | a. Reduce CO emissions and not using oxidation catalyst | i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and<br>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<br>iii. You have recorded the approved operating parameters (if any) during the initial performance test. |

| For each . . . | Complying with the requirement to . . . | You have demonstrated initial compliance if . . . |
|---|---|---|
| 4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP | a. Limit the concentration of CO, and not using oxidation catalyst | i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and<br>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. |
| 5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP | a. Reduce CO emissions, and using a CEMS | i. You have installed a CEMS to continuously monitor CO and either $O_2$ or $CO_2$ at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and<br>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. |
| 6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP | a. Limit the concentration of CO, and using a CEMS | i. You have installed a CEMS to continuously monitor CO and either $O_2$ or $CO_2$ 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. |
| 7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP | a. Reduce formaldehyde emissions and using NSCR | i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and |

| For each . . . | Complying with the requirement to . . . | You have demonstrated initial compliance if . . . |
|---|---|---|
| | | 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. |
| 8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP | a. Reduce formaldehyde emissions and not using NSCR | i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and |
| | | ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and |
| | | iii. You have recorded the approved operating parameters (if any) during the initial performance test. |
| 9. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP | a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR | i. The average formaldehyde concentration, corrected to 15 percent $O_2$, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and<br>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. |
| 10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP | a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR | i. The average formaldehyde concentration, corrected to 15 percent $O_2$, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and<br>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. |
| 11. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP | a. Reduce CO emissions | 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. |

| For each . . . | Complying with the requirement to . . . | You have demonstrated initial compliance if . . . |
|---|---|---|
| 12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP | a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust | i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent $O_2$, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable. |
| 13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year | a. Install an oxidation catalyst | i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent $O_2$; |
| | | ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F. |
| 14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year | a. Install NSCR | i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent $O_2$, or the average reduction of emissions of THC is 30 percent or more; |
| | | ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F. |

[78 FR 6712, Jan. 30, 2013]

**Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements**

As stated in §63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

| For each . . . | Complying with the requirement to . . . | You must demonstrate continuous compliance by . . . |
|---|---|---|
| 1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP | a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS | i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and<br>ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and<br>iii. Reducing these data to 4-hour rolling averages; and |

| For each . . . | Complying with the requirement to . . . | You must demonstrate continuous compliance by . . . |
|---|---|---|
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and |
| | | v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. |
| 2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP | a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS | i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and<br>ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and<br>iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test. |
| 3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP | a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS | i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to §63.6620; and<br>ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and |
| | | iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1. |
| 4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP | a. Reduce formaldehyde emissions and using NSCR | i. Collecting the catalyst inlet temperature data according to §63.6625(b); and |
| | | ii. Reducing these data to 4-hour rolling averages; and |
| | | iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and |
| | | iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. |

| For each . . . | Complying with the requirement to . . . | You must demonstrate continuous compliance by . . . |
|---|---|---|
| 5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP | a. Reduce formaldehyde emissions and not using NSCR | i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and |
| | | ii. Reducing these data to 4-hour rolling averages; and |
| | | iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test. |
| 6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP | a. Reduce formaldehyde emissions | Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved, or to demonstrate that the average reduction of emissions of THC determined from the performance test is equal to or greater than 30 percent.[a] |
| 7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP | a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR | i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and<br>ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and |
| | | iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and |
| | | v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. |
| 8. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP | a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR | i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and<br>ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and |
| | | iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test. |

| For each . . . | Complying with the requirement to . . . | You must demonstrate continuous compliance by . . . |
|---|---|---|
| 9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <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 >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 >500 HP located at an area source of HAP that are remote stationary RICE | a. Work or Management practices | i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or<br>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. |
| 10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE | a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and using oxidation catalyst | 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. |
| 11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE | a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst | 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 |

| For each . . . | Complying with the requirement to . . . | You must demonstrate continuous compliance by . . . |
|---|---|---|
| | | iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test. |
| 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. |
| 13. Existing limited use CI stationary RICE >500 HP | a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using an oxidation catalyst | 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 approved operating parameter (if any) data according to §63.6625(b); and |
| | | iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test. |

| For each . . . | Complying with the requirement to . . . | You must demonstrate continuous compliance by . . . |
|---|---|---|
| 14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year | a. Install an oxidation catalyst | i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent $O_2$; and either<br>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<br>iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F. |
| 15. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year | a. Install NSCR | i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent $O_2$, or the average reduction of emissions of THC is 30 percent or more; and either<br>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<br>iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F. |

[a]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:

| For each . . . | You must submit a . . . | The report must contain . . . | You must submit the report . . . |
|---|---|---|---|
| 1. Existing non-emergency, non-black start stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP | Compliance report | a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or | i. Semiannually according to the requirements in §63.6650(b)(1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and<br>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. |
| | | b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or | i. Semiannually according to the requirements in §63.6650(b). |
| | | c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4). | i. Semiannually according to the requirements in §63.6650(b). |
| 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 | Report | a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and | i. Annually, according to the requirements in §63.6650. |
| | | b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and | i. See item 2.a.i. |
| | | c. Any problems or errors suspected with the meters. | i. See item 2.a.i. |
| 3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >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 | Compliance report | a. The results of the annual compliance demonstration, if conducted during the reporting period. | i. Semiannually according to the requirements in §63.6650(b)(1)-(5). |

| For each . . . | You must submit a . . . | The report must contain . . . | You must submit the report . . . |
|---|---|---|---|
| 4. Emergency stationary RICE that operate or are contractually obligated to be available for more than 15 hours per year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operate for the purposes specified in §63.6640(f)(4)( ii) | Report | a. The information in §63.6650(h)(1) | i. annually according to the requirements in §63.6650(h)(2)-(3). |

[78 FR 6719, Jan. 30, 2013]

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

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

| General provisions citation | Subject of citation | Applies to subpart | Explanation |
|---|---|---|---|
| §63.1 | General applicability of the General Provisions | Yes. | |
| §63.2 | Definitions | Yes | Additional terms defined in §63.6675. |
| §63.3 | Units and abbreviations | Yes. | |
| §63.4 | Prohibited activities and circumvention | Yes. | |
| §63.5 | Construction and reconstruction | Yes. | |
| §63.6(a) | Applicability | Yes. | |
| §63.6(b)(1)-(4) | Compliance dates for new and reconstructed sources | Yes. | |
| §63.6(b)(5) | Notification | Yes. | |
| §63.6(b)(6) | [Reserved] | | |
| §63.6(b)(7) | Compliance dates for new and reconstructed area sources that become major sources | Yes. | |
| §63.6(c)(1)-(2) | Compliance dates for existing sources | Yes. | |
| §63.6(c)(3)-(4) | [Reserved] | | |
| §63.6(c)(5) | Compliance dates for existing area sources that become major sources | Yes. | |
| §63.6(d) | [Reserved] | | |
| §63.6(e) | Operation and maintenance | No. | |
| §63.6(f)(1) | Applicability of standards | No. | |
| §63.6(f)(2) | Methods for determining compliance | Yes. | |
| §63.6(f)(3) | Finding of compliance | Yes. | |
| §63.6(g)(1)-(3) | Use of alternate standard | Yes. | |
| §63.6(h) | Opacity and visible emission standards | No | Subpart ZZZZ does not contain opacity or visible emission standards. |
| §63.6(i) | Compliance extension procedures and criteria | Yes. | |

| General provisions citation | Subject of citation | Applies to subpart | Explanation |
|---|---|---|---|
| §63.6(j) | Presidential compliance exemption | Yes. | |
| §63.7(a)(1)-(2) | Performance test dates | Yes | Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612. |
| §63.7(a)(3) | CAA section 114 authority | Yes. | |
| §63.7(b)(1) | Notification of performance test | Yes | Except that §63.7(b)(1) only applies as specified in §63.6645. |
| §63.7(b)(2) | Notification of rescheduling | Yes | Except that §63.7(b)(2) only applies as specified in §63.6645. |
| §63.7(c) | Quality assurance/test plan | Yes | Except that §63.7(c) only applies as specified in §63.6645. |
| §63.7(d) | Testing facilities | Yes. | |
| §63.7(e)(1) | Conditions for conducting performance tests | No. | Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620. |
| §63.7(e)(2) | Conduct of performance tests and reduction of data | Yes | Subpart ZZZZ specifies test methods at §63.6620. |
| §63.7(e)(3) | Test run duration | Yes. | |
| §63.7(e)(4) | Administrator may require other testing under section 114 of the CAA | Yes. | |
| §63.7(f) | Alternative test method provisions | Yes. | |
| §63.7(g) | Performance test data analysis, recordkeeping, and reporting | Yes. | |
| §63.7(h) | Waiver of tests | Yes. | |
| §63.8(a)(1) | Applicability of monitoring requirements | Yes | Subpart ZZZZ contains specific requirements for monitoring at §63.6625. |
| §63.8(a)(2) | Performance specifications | Yes. | |
| §63.8(a)(3) | [Reserved] | | |
| §63.8(a)(4) | Monitoring for control devices | No. | |
| §63.8(b)(1) | Monitoring | Yes. | |
| §63.8(b)(2)-(3) | Multiple effluents and multiple monitoring systems | Yes. | |
| §63.8(c)(1) | Monitoring system operation and maintenance | Yes. | |
| §63.8(c)(1)(i) | Routine and predictable SSM | No | |
| §63.8(c)(1)(ii) | SSM not in Startup Shutdown Malfunction Plan | Yes. | |
| §63.8(c)(1)(iii) | Compliance with operation and maintenance requirements | No | |
| §63.8(c)(2)-(3) | Monitoring system installation | Yes. | |
| §63.8(c)(4) | Continuous monitoring system (CMS) requirements | Yes | Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS). |
| §63.8(c)(5) | COMS minimum procedures | No | Subpart ZZZZ does not require COMS. |
| §63.8(c)(6)-(8) | CMS requirements | Yes | Except that subpart ZZZZ does not require COMS. |

| General provisions citation | Subject of citation | Applies to subpart | Explanation |
|---|---|---|---|
| §63.8(d) | CMS quality control | Yes. | |
| §63.8(e) | CMS performance evaluation | Yes | Except for §63.8(e)(5)(ii), which applies to COMS. |
| | | Except that §63.8(e) only applies as specified in §63.6645. | |
| §63.8(f)(1)-(5) | Alternative monitoring method | Yes | Except that §63.8(f)(4) only applies as specified in §63.6645. |
| §63.8(f)(6) | Alternative to relative accuracy test | Yes | Except that §63.8(f)(6) only applies as specified in §63.6645. |
| §63.8(g) | Data reduction | Yes | Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640. |
| §63.9(a) | Applicability and State delegation of notification requirements | Yes. | |
| §63.9(b)(1)-(5) | Initial notifications | Yes | Except that §63.9(b)(3) is reserved. |
| | | Except that §63.9(b) only applies as specified in §63.6645. | |
| §63.9(c) | Request for compliance extension | Yes | Except that §63.9(c) only applies as specified in §63.6645. |
| §63.9(d) | Notification of special compliance requirements for new sources | Yes | Except that §63.9(d) only applies as specified in §63.6645. |
| §63.9(e) | Notification of performance test | Yes | Except that §63.9(e) only applies as specified in §63.6645. |
| §63.9(f) | Notification of visible emission (VE)/opacity test | No | Subpart ZZZZ does not contain opacity or VE standards. |
| §63.9(g)(1) | Notification of performance evaluation | Yes | Except that §63.9(g) only applies as specified in §63.6645. |
| §63.9(g)(2) | Notification of use of COMS data | No | Subpart ZZZZ does not contain opacity or VE standards. |
| §63.9(g)(3) | Notification that criterion for alternative to RATA is exceeded | Yes | If alternative is in use. |
| | | Except that §63.9(g) only applies as specified in §63.6645. | |
| §63.9(h)(1)-(6) | Notification of compliance status | Yes | Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved. |
| | | | Except that §63.9(h) only applies as specified in §63.6645. |
| §63.9(i) | Adjustment of submittal deadlines | Yes. | |
| §63.9(j) | Change in previous information | Yes. | |
| §63.10(a) | Administrative provisions for recordkeeping/reporting | Yes. | |

| General provisions citation | Subject of citation | Applies to subpart | Explanation |
|---|---|---|---|
| §63.10(b)(1) | Record retention | Yes | Except that the most recent 2 years of data do not have to be retained on site. |
| §63.10(b)(2)(i)-(v) | Records related to SSM | No. | |
| §63.10(b)(2)(vi)-(xi) | Records | Yes. | |
| §63.10(b)(2)(xii) | Record when under waiver | Yes. | |
| §63.10(b)(2)(xiii) | Records when using alternative to RATA | Yes | For CO standard if using RATA alternative. |
| §63.10(b)(2)(xiv) | Records of supporting documentation | Yes. | |
| §63.10(b)(3) | Records of applicability determination | Yes. | |
| §63.10(c) | Additional records for sources using CEMS | Yes | Except that §63.10(c)(2)-(4) and (9) are reserved. |
| §63.10(d)(1) | General reporting requirements | Yes. | |
| §63.10(d)(2) | Report of performance test results | Yes. | |
| §63.10(d)(3) | Reporting opacity or VE observations | No | Subpart ZZZZ does not contain opacity or VE standards. |
| §63.10(d)(4) | Progress reports | Yes. | |
| §63.10(d)(5) | Startup, shutdown, and malfunction reports | No. | |
| §63.10(e)(1) and (2)(i) | Additional CMS Reports | Yes. | |
| §63.10(e)(2)(ii) | COMS-related report | No | Subpart ZZZZ does not require COMS. |
| §63.10(e)(3) | Excess emission and parameter exceedances reports | Yes. | Except that §63.10(e)(3)(i) (C) is reserved. |
| §63.10(e)(4) | Reporting COMS data | No | Subpart ZZZZ does not require COMS. |
| §63.10(f) | Waiver for recordkeeping/reporting | Yes. | |
| §63.11 | Flares | No. | |
| §63.12 | State authority and delegations | Yes. | |
| §63.13 | Addresses | Yes. | |
| §63.14 | Incorporation by reference | Yes. | |
| §63.15 | Availability of information | Yes. | |

[75 FR 9688, Mar. 3, 2010, as amended at 78 FR 6720, Jan. 30, 2013]

**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 ($O_2$) 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 ($O_2$).

| Analyte | CAS No. | Sensitivity |
|---|---|---|
| Carbon monoxide (CO) | 630-08-0 | Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive. |
| Oxygen ($O_2$) | *7782-44-7* | |

**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 $O_2$, 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 $O_2$ 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 $O_2$ 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 $O_2$ and moisture in the electrolyte reserve and provides a mechanism to de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre- sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

*3.10 Sampling Day.* A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

*3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check.* The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

*3.12 Performance-Established Configuration.* The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

**4.0 Interferences.**

When present in sufficient concentrations, NO and $NO_2$ are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

**5.0 Safety. [Reserved]**

**6.0 Equipment and Supplies.**

**6.1 What equipment do I need for the measurement system?**

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

**6.2 Measurement System Components.**

*6.2.1 Sample Probe.* A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

*6.2.2 Sample Line.* Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

*6.2.3 Calibration Assembly (optional).* A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

*6.2.4 Particulate Filter (optional).* Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

*6.2.5 Sample Pump.* A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

*6.2.8 Sample Flow Rate Monitoring.* An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

*6.2.9 Sample Gas Manifold (optional).* A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

*6.2.10 EC cell.* A device containing one or more EC cells to determine the CO and $O_2$ concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

*6.2.11 Data Recorder.* A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for $O_2$; and one degree (either °C or °F) for temperature. Alternatively, you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.

*6.2.12 Interference Gas Filter or Scrubber.* A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

**7.0 Reagents and Standards. What calibration gases are needed?**

*7.1 Calibration Gases.* CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and $O_2$. 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 $O_2$) is acceptable for calibration of the $O_2$ cell. If needed, any lower percentage $O_2$ calibration gas must be a mixture of $O_2$ 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 $O_2$ Calibration Gas Concentration.*

Select an $O_2$ 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 $O_2$. When the average exhaust gas $O_2$ readings are above 6 percent, you may use dry ambient air (20.9 percent $O_2$) for the up-scale $O_2$ 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., $CO_2$).

**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 that 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 $O_2$ 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 $O_2$ 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 $O_2$ for the $O_2$ 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 $O_2$, 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 $O_2$, 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 $O_2$ 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 $NO_2$ gas standards that are generally recognized as representative of diesel-fueled engine NO and $NO_2$ 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 $NO_2$ interference response should be less than or equal to ±5 percent of the up-scale CO calibration gas concentration.

*13.3 Repeatability Check.* Conduct the following check once for each nominal range that is to be used on the CO EC cell within 5 days prior to each field sampling program. If a field sampling program lasts longer than 5 days, repeat this check every 5 days. Immediately repeat the check if the EC cell is replaced or if the EC cell is exposed to gas concentrations greater than 150 percent of the highest up-scale gas concentration.

*13.3.1 Repeatability Check Procedure.* Perform a complete EC cell sampling run (all three phases) by introducing the CO calibration gas to the measurement system and record the response. Follow Section 10.1.3. Use Figure 1 to record all data. Repeat the run three times for a total of four complete runs. During the four repeatability check runs, do not adjust the system except where necessary to achieve the correct calibration gas flow rate at the analyzer.

*13.3.2 Repeatability Check Calculations.* Determine the highest and lowest average “measurement data phase” CO concentrations from the four repeatability check runs and record the results on Figure 1 or a similar form. The absolute value of the difference between the maximum and minimum average values recorded must not vary more than ±3 percent or ±1 ppm of the up-scale gas value, whichever is less restrictive.

**14.0 Pollution Prevention (Reserved)**

**15.0 Waste Management (Reserved)**

**16.0 Alternative Procedures (Reserved)**

**17.0 References**

(1) “Development of an Electrochemical Cell Emission Analyzer Test Protocol”, Topical Report, Phil Juneau, Emission Monitoring, Inc., July 1997.

(2) “Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers, and Process Heaters Using Portable Analyzers”, EMC Conditional Test Protocol 30 (CTM-30), Gas Research Institute Protocol GRI-96/0008, Revision 7, October 13, 1997.

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

(4) “Code of Federal Regulations”, Protection of Environment, 40 CFR, Part 60, Appendix A, Methods 1-4; 10.

Table 1: Appendix A—Sampling Run Data.

| Facility_____ Engine I.D._____ Date_____ | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Run Type: | (_) | | | | (_) | | | (_) | | | (_) |
| (X) | Pre-Sample Calibration | | | | Stack Gas Sample | | | Post-Sample Cal. Check | | | Repeatability Check |
| Run # | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | Time | Scrub. OK | Flow- Rate |
| Gas | $O_2$ | CO | $O_2$ | CO | $O_2$ | CO | $O_2$ | CO | | | |
| Sample Cond. Phase | | | | | | | | | | | |
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[78 FR 6721, Jan. 30, 2013]

# Attachment C
# Part 70 Operating Permit Renewal T029-32119-00005

[Downloaded from the eCFR on May 10, 2013]

**Electronic Code of Federal Regulations**

**Title 40: Protection of Environment**

**Part 63, Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters**

Source: 76 FR 15664, Mar. 21, 2011, unless otherwise noted.

**What This Subpart Covers**

**§ 63.7480 What is the purpose of this subpart?**

This subpart establishes national emission limitations and work practice standards for hazardous air pollutants (HAP) emitted from industrial, commercial, and institutional boilers and process heaters located at major sources of HAP. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and work practice standards.

**§ 63.7485 Am I subject to this subpart?**

You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in § 63.7575 that is located at, or is part of, a major source of HAP, except as specified in § 63.7491. For purposes of this subpart, a major source of HAP is as defined in § 63.2, except that for oil and natural gas production facilities, a major source of HAP is as defined in § 63.7575.

[78 FR 7162, Jan. 31, 2013]

**§ 63.7490 What is the affected source of this subpart?**

(a) This subpart applies to new, reconstructed, and existing affected sources as described in paragraphs (a)(1) and (2) of this section.

(1) The affected source of this subpart is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in § 63.7575.

(2) The affected source of this subpart is each new or reconstructed industrial, commercial, or institutional boiler or process heater, as defined in § 63.7575, located at a major source.

(b) A boiler or process heater is new if you commence construction of the boiler or process heater after June 4, 2010, and you meet the applicability criteria at the time you commence construction.

(c) A boiler or process heater is reconstructed if you meet the reconstruction criteria as defined in § 63.2, you commence reconstruction after June 4, 2010, and you meet the applicability criteria at the time you commence reconstruction.

(d) A boiler or process heater is existing if it is not new or reconstructed.

(e) An existing electric utility steam generating unit (EGU) that meets the applicability requirements of this subpart after the effective date of this final rule due to a change (e.g., fuel switch) is considered to be an existing source under this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013]

**§ 63.7491 Are any boilers or process heaters not subject to this subpart?**

The types of boilers and process heaters listed in paragraphs (a) through (n) of this section are not subject to this subpart.

(a) An electric utility steam generating unit (EGU) covered by subpart UUUUU of this part.

(b) A recovery boiler or furnace covered by subpart MM of this part.

(c) A boiler or process heater that is used specifically for research and development, including test steam boilers used to provide steam for testing the propulsion systems on military vessels. This does not include units that provide heat or steam to a process at a research and development facility.

(d) A hot water heater as defined in this subpart.

(e) A refining kettle covered by subpart X of this part.

(f) An ethylene cracking furnace covered by subpart YY of this part.

(g) Blast furnace stoves as described in EPA-453/R-01-005 (incorporated by reference, see § 63.14).

(h) Any boiler or process heater that is part of the affected source subject to another subpart of this part, such as boilers and process heaters used as control devices to comply with subparts JJJ, OOO, PPP, and U of this part.

(i) Any boiler or process heater that is used as a control device to comply with another subpart of this part, or part 60, part 61, or part 65 of this chapter provided that at least 50 percent of the average annual heat input during any 3 consecutive calendar years to the boiler or process heater is provided by regulated gas streams that are subject to another standard.

(j) Temporary boilers as defined in this subpart.

(k) Blast furnace gas fuel-fired boilers and process heaters as defined in this subpart.

(l) Any boiler specifically listed as an affected source in any standard(s) established under section 129 of the Clean Air Act.

(m) A unit that burns hazardous waste covered by Subpart EEE of this part. A unit that is exempt from Subpart EEE as specified in § 63.1200(b) is not covered by Subpart EEE.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013]

EDITORIAL NOTE: At 78 FR 7162, Jan. 31, 2013, § 63.7491 was amended by revising paragraph (n). However, there is no paragraph (n) to revise.

**§ 63.7495 When do I have to comply with this subpart?**

(a) If you have a new or reconstructed boiler or process heater, you must comply with this subpart by January 31, 2013, or upon startup of your boiler or process heater, whichever is later.

(b) If you have an existing boiler or process heater, you must comply with this subpart no later than January 31, 2016, except as provided in § 63.6(i).

(c) If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, paragraphs (c)(1) and (2) of this section apply to you.

(1) Any new or reconstructed boiler or process heater at the existing source must be in compliance with this subpart upon startup.

(2) Any existing boiler or process heater at the existing source must be in compliance with this subpart within 3 years after the source becomes a major source.

(d) You must meet the notification requirements in § 63.7545 according to the schedule in § 63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.

(e) If you own or operate an industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for the exemption in § 63.7491(l) for commercial and industrial solid waste incineration units covered by part 60, subpart CCCC or subpart DDDD, and you cease combusting solid waste, you must be in compliance with this subpart on the effective date of the switch from waste to fuel.

(f) If you own or operate an existing EGU that becomes subject to this subpart after January 31, 2013, you must be in compliance with the applicable existing source provisions of this subpart on the effective date such unit becomes subject to this subpart.

(g) If you own or operate an existing industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for a exemption in § 63.7491(i) that becomes subject to this subpart after January 31, 2013, you must be in compliance with the applicable existing source provisions of this subpart within 3 years after such unit becomes subject to this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013]

EDITORIAL NOTE: At 78 FR 7162, Jan. 31, 2013, § 63.7495 was amended by adding paragraph (e). However, there is already a paragraph (e).

**Emission Limitations and Work Practice Standards**

**§ 63.7499 What are the subcategories of boilers and process heaters?**

The subcategories of boilers and process heaters, as defined in § 63.7575 are:

(a) Pulverized coal/solid fossil fuel units.

(b) Stokers designed to burn coal/solid fossil fuel.

(c) Fluidized bed units designed to burn coal/solid fossil fuel.

(d) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solid.

(e) Fluidized bed units designed to burn biomass/bio-based solid.

(f) Suspension burners designed to burn biomass/bio-based solid.

(g) Fuel cells designed to burn biomass/bio-based solid.

(h) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.

(i) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solid.

(j) Dutch ovens/pile burners designed to burn biomass/bio-based solid.

(k) Units designed to burn liquid fuel that are non-continental units.

(l) Units designed to burn gas 1 fuels.

(m) Units designed to burn gas 2 (other) gases.

(n) Metal process furnaces.

(o) Limited-use boilers and process heaters.

(p) Units designed to burn solid fuel.

(q) Units designed to burn liquid fuel.

(r) Units designed to burn coal/solid fossil fuel.

(s) Fluidized bed units with an integrated fluidized bed heat exchanger designed to burn coal/solid fossil fuel.

(t) Units designed to burn heavy liquid fuel.

(u) Units designed to burn light liquid fuel.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013]

**§ 63.7500 What emission limitations, work practice standards, and operating limits must I meet?**

(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b), through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.

(1) You must meet each emission limit and work practice standard in Tables 1 through 3, and 11 through 13 to this subpart that applies to your boiler or process heater, for each boiler or process heater at your source, except as provided under § 63.7522. The output-based emission limits, in units of pounds per million Btu of steam output, in Tables 1 or 2 to this subpart are an alternative applicable only to boilers and process heaters that generate steam. The output-based emission limits, in units of pounds per megawatt-hour, in Tables 1 or 2 to this subpart are an alternative applicable only to boilers that generate electricity. If you operate a new boiler or process heater, you can choose to comply with alternative limits as discussed in paragraphs (a)(1)(i) through (a)(1)(iii) of this section, but on or after January 31, 2016, you must comply with the emission limits in Table 1 to this subpart.

(i) If your boiler or process heater commenced construction or reconstruction after June 4, 2010 and before May 20, 2011, you may comply with the emission limits in Table 1 or 11 to this subpart until January 31, 2016.

(ii) If your boiler or process heater commenced construction or reconstruction after May 20, 2011 and before December 23, 2011, you may comply with the emission limits in Table 1 or 12 to this subpart until January 31, 2016.

(iii) If your boiler or process heater commenced construction or reconstruction after December 23, 2011 and before January 31, 2013, you may comply with the emission limits in Table 1 or 13 to this subpart until January 31, 2016.

(2) You must meet each operating limit in Table 4 to this subpart that applies to your boiler or process heater. If you use a control device or combination of control devices not covered in Table 4 to this subpart, or you wish to establish and monitor an alternative operating limit or an alternative monitoring parameter, you must apply to the EPA Administrator for approval of alternative monitoring under § 63.8(f).

(3) At all times, you must operate and maintain any affected source (as defined in § 63.7490), 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 that 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) As provided in § 63.6(g), EPA may approve use of an alternative to the work practice standards in this section.

(c) Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in § 63.7540. They are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, the annual tune-up, or the energy assessment requirements in Table 3 to this subpart, or the operating limits in Table 4 to this subpart.

(d) Boilers and process heaters with a heat input capacity of less than or equal to 5 million Btu per hour in the units designed to burn gas 2 (other) fuels subcategory or units designed to burn light liquid fuels subcategory must complete a tune-up every 5 years as specified in § 63.7540.

(e) Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity of less than or equal to 5 million Btu per hour must complete a tune-up every 5 years as specified in § 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity greater than 5 million Btu per hour and less than 10 million Btu per hour must complete a tune-up every 2 years as specified in § 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, or the operating limits in Table 4 to this subpart.

(f) These standards apply at all times the affected unit is operating, except during periods of startup and shutdown during which time you must comply only with Table 3 to this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013]

**§ 63.7501 Affirmative Defense for Violation of Emission Standards During Malfunction.**

In response to an action to enforce the standards set forth in § 63.7500 you may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined at § 63.2. Appropriate penalties may be assessed 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) *Assertion of affirmative defense.* To establish the affirmative defense in any action to enforce such a standard, you must timely meet the reporting requirements in paragraph (b) of this section, and must prove by a preponderance of evidence that:

(1) The violation:

(i) Was caused by a sudden, infrequent, and unavoidable failure of air pollution control 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) Was not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

(2) Repairs were made as expeditiously as possible when a violation occurred; and

(3) The frequency, amount, and duration of the violation (including any bypass) were minimized to the maximum extent practicable; and

(4) If the violation 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 violation 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 violation were documented by properly signed, contemporaneous operating logs; and

(8) At all times, the affected source 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 violation resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of any emissions that were the result of the malfunction.

(b) *Report.* The owner or operator seeking to assert an affirmative defense shall submit a written report to the Administrator with all necessary supporting documentation, that it has met the requirements set forth in § 63.7500 of this section. This affirmative defense report shall be included in the first periodic compliance, deviation report or excess emission report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If such compliance, deviation report or excess emission report is due less than 45 days after the initial occurrence of the violation, the affirmative defense report may be included in the second compliance, deviation report or excess emission report due after the initial occurrence of the violation of the relevant standard.

[78 FR 7163, Jan. 31, 2013]

**General Compliance Requirements**

**§ 63.7505 What are my general requirements for complying with this subpart?**

(a) You must be in compliance with the emission limits, work practice standards, and operating limits in this subpart. These limits apply to you at all times the affected unit is operating except for the periods noted in § 63.7500(f).

(b) [Reserved]

(c) You must demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or continuous monitoring systems (CMS), including a continuous emission monitoring system (CEMS), continuous opacity monitoring system (COMS), continuous parameter monitoring system (CPMS), or particulate matter continuous parameter monitoring system (PM CPMS), where applicable. You may demonstrate compliance with the applicable emission limit for hydrogen chloride (HCl), mercury, or total selected metals (TSM) using fuel analysis if the emission rate calculated according to § 63.7530(c) is less than the applicable emission limit. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) Otherwise, you must demonstrate compliance for HCl, mercury, or TSM using performance testing, if subject to an applicable emission limit listed in Tables 1, 2, or 11 through 13 to this subpart.

(d) If you demonstrate compliance with any applicable emission limit through performance testing and subsequent compliance with operating limits (including the use of CPMS), or with a CEMS, or COMS, you must develop a site-specific monitoring plan according to the requirements in paragraphs (d)(1) through (4) of this section for the use of any CEMS, COMS, or CPMS. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under § 63.8(f).

(1) For each CMS required in this section (including CEMS, COMS, or CPMS), you must develop, and submit to the Administrator for approval upon request, a site-specific monitoring plan that addresses design, data collection, and the quality assurance and quality control elements outlined in § 63.8(d) and the elements described in paragraphs (d)(1)(i) through (iii) of this section. You must submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation of your CMS. This requirement to develop and submit a site specific monitoring plan does not apply to affected sources with existing CEMS or COMS operated according to the performance specifications under appendix B to part 60 of this chapter and that meet the requirements of § 63.7525. Using the process described in § 63.8(f)(4), you may request approval of alternative monitoring system quality assurance and quality control procedures in place of those specified in this paragraph and, if approved, include the alternatives in your site-specific monitoring plan.

(i) Installation of the CMS 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);

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations, accuracy audits, analytical drift).

(2) In your site-specific monitoring plan, you must also address paragraphs (d)(2)(i) through (iii) of this section.

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1)(ii), (c)(3), and (c)(4)(ii);

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d); and

(iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c) (as applicable in Table 10 to this subpart), (e)(1), and (e)(2)(i).

(3) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan.

(4) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7164, Jan. 31, 2013]

**Testing, Fuel Analyses, and Initial Compliance Requirements**

**§ 63.7510 What are my initial compliance requirements and by what date must I conduct them?**

(a) For each boiler or process heater that is required or that you elect to demonstrate compliance with any of the applicable emission limits in Tables 1 or 2 or 11 through 13 of this subpart through performance testing, your initial compliance requirements include all the following:

(1) Conduct performance tests according to § 63.7520 and Table 5 to this subpart.

(2) Conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart, except as specified in paragraphs (a)(2)(i) through (iii) of this section.

(i) For each boiler or process heater that burns a single type of fuel, you are not required to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart. For purposes of this subpart, units that use a supplemental fuel only for startup, unit shutdown, and transient flame stability purposes still qualify as units that burn a single type of fuel, and the supplemental fuel is not subject to the fuel analysis requirements under § 63.7521 and Table 6 to this subpart.

(ii) When natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels, you are not required to conduct a fuel analysis of those fuels according to § 63.7521 and Table 6 to this subpart. If gaseous fuels other than natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels and those gaseous fuels are subject to another subpart of this part, part 60, part 61, or part 65, you are not required to conduct a fuel analysis of those fuels according to § 63.7521 and Table 6 to this subpart.

(iii) You are not required to conduct a chlorine fuel analysis for any gaseous fuels. You must conduct a fuel analysis for mercury on gaseous fuels unless the fuel is exempted in paragraphs (a)(2)(i) and (ii) of this section.

(3) Establish operating limits according to § 63.7530 and Table 7 to this subpart.

(4) Conduct CMS performance evaluations according to § 63.7525.

(b) For each boiler or process heater that you elect to demonstrate compliance with the applicable emission limits in Tables 1 or 2 or 11 through 13 to this subpart for HCl, mercury, or TSM through fuel analysis, your initial compliance requirement is to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart and establish operating limits according to § 63.7530 and Table 8 to this subpart. The fuels described in paragraph (a)(2)(i) and (ii) of this section are exempt from these fuel analysis and operating limit requirements. The fuels described in paragraph (a)(2)(ii) of this section are exempt from the chloride fuel analysis and operating limit requirements. Boilers and process heaters that use a CEMS for mercury or HCl are exempt from the performance testing and operating limit requirements specified in paragraph (a) of this section for the HAP for which CEMS are used.

(c) If your boiler or process heater is subject to a carbon monoxide (CO) limit, your initial compliance demonstration for CO is to conduct a performance test for CO according to Table 5 to this subpart or conduct a performance evaluation of your continuous CO monitor, if applicable, according to § 63.7525(a). Boilers and process heaters that use a CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 12, or 11 through 13 to this subpart, as specified in § 63.7525(a), are exempt from the initial CO performance testing and oxygen concentration operating limit requirements specified in paragraph (a) of this section.

(d) If your boiler or process heater is subject to a PM limit, your initial compliance demonstration for PM is to conduct a performance test in accordance with § 63.7520 and Table 5 to this subpart.

(e) For existing affected sources (as defined in § 63.7490), you must complete the initial compliance demonstration, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the compliance date that is specified for your source in § 63.7495 and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart, except as specified in paragraph (j) of this section. You must complete an initial tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) no later than the compliance date specified in § 63.7495, except as specified in paragraph (j) of this section. You must complete the one-time energy assessment specified in Table 3 to this subpart no later than the compliance date specified in § 63.7495, except as specified in paragraph (j) of this section.

(f) For new or reconstructed affected sources (as defined in § 63.7490), you must complete the initial compliance demonstration with the emission limits no later than July 30, 2013 or within 180 days after startup of the source, whichever is later. If you are demonstrating compliance with an emission limit in Tables 11 through 13 to this subpart that is less stringent (that is, higher) than the applicable emission limit in Table 1 to this subpart, you must demonstrate compliance with the applicable emission limit in Table 1 no later than July 29, 2016.

(g) For new or reconstructed affected sources (as defined in § 63.7490), you must demonstrate initial compliance with the applicable work practice standards in Table 3 to this subpart within the applicable annual, biennial, or 5-year schedule as specified in § 63.7540(a) following the initial compliance date specified in § 63.7495(a). Thereafter, you are required to complete the applicable annual, biennial, or 5-year tune-up as specified in § 63.7540(a).

(h) For affected sources (as defined in § 63.7490) that ceased burning solid waste consistent with § 63.7495(e) and for which the initial compliance date has passed, you must demonstrate compliance within 60 days of the effective date of the waste-to-fuel switch. If you have not conducted your compliance demonstration for this subpart within the previous 12 months, you must complete all compliance demonstrations for this subpart before you commence or recommence combustion of solid waste.

(i) For an existing EGU that becomes subject after January 31, 2013, you must demonstrate compliance within 180 days after becoming an affected source.

(j) For existing affected sources (as defined in § 63.7490) that have not operated between the effective date of the rule and the compliance date that is specified for your source in § 63.7495, you must complete the initial compliance demonstration, if subject to the emission limits in Table 2 to this subpart, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the re-start of the affected source and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart. You must complete an initial tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) no later than 30 days after the re-start of the affected source and, if applicable, complete the one-time energy assessment specified in Table 3 to this subpart, no later than the compliance date specified in § 63.7495.

[78 FR 7164, Jan. 31, 2013]

**§ 63.7515 When must I conduct subsequent performance tests, fuel analyses, or tune-ups?**

(a) You must conduct all applicable performance tests according to § 63.7520 on an annual basis, except as specified in paragraphs (b) through (e), (g), and (h) of this section. Annual performance tests must be completed no more than 13 months after the previous performance test, except as specified in paragraphs (b) through (e), (g), and (h) of this section.

(b) If your performance tests for a given pollutant for at least 2 consecutive years show that your emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Tables 1 and 2 or 11 through 13 to this subpart, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, you may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test. If you elect to demonstrate compliance using emission averaging under § 63.7522, you must continue to conduct performance tests annually. The requirement to test at maximum chloride input level is waived unless the stack test is conducted for HCl. The requirement to test at maximum mercury input level is waived unless the stack test is conducted for mercury. The requirement to test at maximum TSM input level is waived unless the stack test is conducted for TSM.

(c) If a performance test shows emissions exceeded the emission limit or 75 percent of the emission limit (as specified in Tables 1 and 2 or 11 through 13 to this subpart) for a pollutant, you must conduct annual performance tests for that pollutant until all performance tests over a consecutive 2-year period meet the required level (at or below 75 percent of the emission limit, as specified in Tables 1 and 2 or 11 through 13 to this subpart).

(d) If you are required to meet an applicable tune-up work practice standard, you must conduct an annual, biennial, or 5-year performance tune-up according to § 63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in § 63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in § 63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in § 63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in § 63.7490), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after the initial startup of the new or reconstructed affected source.

(e) If you demonstrate compliance with the mercury, HCl, or TSM based on fuel analysis, you must conduct a monthly fuel analysis according to § 63.7521 for each type of fuel burned that is subject to an emission limit in Tables 1, 2, or 11 through 13 to this subpart. You may comply with this monthly requirement by completing the fuel analysis any time within the calendar month as long as the analysis is separated from the previous analysis by at least 14 calendar days. If you burn a new type of fuel, you must conduct a fuel analysis before burning the new type of fuel in your boiler or process heater. You must still meet all applicable continuous compliance requirements in § 63.7540. If each of 12 consecutive monthly fuel analyses demonstrates 75 percent or less of the compliance level, you may decrease the fuel analysis frequency to quarterly for that fuel. If any quarterly sample exceeds 75 percent of the compliance level or you begin burning a new type of fuel, you must return to monthly monitoring for that fuel, until 12 months of fuel analyses are again less than 75 percent of the compliance level.

(f) You must report the results of performance tests and the associated fuel analyses within 60 days after the completion of the performance tests. This report must also verify that the operating limits for each boiler or process

heater have not changed or provide documentation of revised operating limits established according to § 63.7530 and Table 7 to this subpart, as applicable. The reports for all subsequent performance tests must include all applicable information required in § 63.7550.

(g) For affected sources (as defined in § 63.7490) that have not operated since the previous compliance demonstration and more than one year has passed since the previous compliance demonstration, you must complete the subsequent compliance demonstration, if subject to the emission limits in Tables 1, 2, or 11 through 13 to this subpart, no later than 180 days after the re-start of the affected source and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart. You must complete a subsequent tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) and the schedule described in § 63.7540(a)(13) for units that are not operating at the time of their scheduled tune-up.

(h) If your affected boiler or process heater is in the unit designed to burn light liquid subcategory and you combust ultra low sulfur liquid fuel, you do not need to conduct further performance tests if the pollutants measured during the initial compliance performance tests meet the emission limits in Tables 1 or 2 of this subpart providing you demonstrate ongoing compliance with the emissions limits by monitoring and recording the type of fuel combusted on a monthly basis. If you intend to use a fuel other than ultra low sulfur liquid fuel, natural gas, refinery gas, or other gas 1 fuel, you must conduct new performance tests within 60 days of burning the new fuel type.

(i) If you operate a CO CEMS that meets the Performance Specifications outlined in § 63.7525(a)(3) of this subpart to demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, you are not required to conduct CO performance tests and are not subject to the oxygen concentration operating limit requirement specified in § 63.7510(a).

[78 FR 7165, Jan. 31, 2013]

**§ 63.7520 What stack tests and procedures must I use?**

(a) You must conduct all performance tests according to § 63.7(c), (d), (f), and (h). You must also develop a site-specific stack test plan according to the requirements in § 63.7(c). You shall conduct all performance tests under such conditions as the Administrator specifies to you based on the representative performance of each boiler or process heater for the period being tested. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests.

(b) You must conduct each performance test according to the requirements in Table 5 to this subpart.

(c) You must conduct each performance test under the specific conditions listed in Tables 5 and 7 to this subpart. You must conduct performance tests at representative operating load conditions while burning the type of fuel or mixture of fuels that has the highest content of chlorine and mercury, and TSM if you are opting to comply with the TSM alternative standard and you must demonstrate initial compliance and establish your operating limits based on these performance tests. These requirements could result in the need to conduct more than one performance test. Following each performance test and until the next performance test, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(d) You must conduct a minimum of three separate test runs for each performance test required in this section, as specified in § 63.7(e)(3). Each test run must comply with the minimum applicable sampling times or volumes specified in Tables 1 and 2 or 11 through 13 to this subpart.

(e) To determine compliance with the emission limits, you must use the F-Factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 at 40 CFR part 60, appendix A-7 of this chapter to convert the measured particulate matter (PM) concentrations, the measured HCl concentrations, the measured mercury concentrations, and the measured TSM concentrations that result from the performance test to pounds per million Btu heat input emission rates.

(f) Except for a 30-day rolling average based on CEMS (or sorbent trap monitoring system) data, if measurement results for any pollutant are reported as below the method detection level (e.g., laboratory analytical results for one or more sample components are below the method defined analytical detection level), you must use the method detection level as the measured emissions level for that pollutant in calculating compliance. The measured result for

a multiple component analysis (e.g., analytical values for multiple Method 29 fractions both for individual HAP metals and for total HAP metals) may include a combination of method detection level data and analytical data reported above the method detection level.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7166, Jan. 31, 2013]

**§ 63.7521 What fuel analyses, fuel specification, and procedures must I use?**

(a) For solid and liquid fuels, you must conduct fuel analyses for chloride and mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. For solid fuels and liquid fuels, you must also conduct fuel analyses for TSM if you are opting to comply with the TSM alternative standard. For gas 2 (other) fuels, you must conduct fuel analyses for mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) For purposes of complying with this section, a fuel gas system that consists of multiple gaseous fuels collected and mixed with each other is considered a single fuel type and sampling and analysis is only required on the combined fuel gas system that will feed the boiler or process heater. Sampling and analysis of the individual gaseous streams prior to combining is not required. You are not required to conduct fuel analyses for fuels used for only startup, unit shutdown, and transient flame stability purposes. You are required to conduct fuel analyses only for fuels and units that are subject to emission limits for mercury, HCl, or TSM in Tables 1 and 2 or 11 through 13 to this subpart. Gaseous and liquid fuels are exempt from the sampling requirements in paragraphs (c) and (d) of this section and Table 6 to this subpart.

(b) You must develop a site-specific fuel monitoring plan according to the following procedures and requirements in paragraphs (b)(1) and (2) of this section, if you are required to conduct fuel analyses as specified in § 63.7510.

(1) If you intend to use an alternative analytical method other than those required by Table 6 to this subpart, you must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in § 63.7510.

(2) You must include the information contained in paragraphs (b)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all fuel types anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the notification of whether you or a fuel supplier will be conducting the fuel analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the composite samples if your procedures are different from paragraph (c) or (d) of this section. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types.

(iv) For each anticipated fuel type, the analytical methods from Table 6, with the expected minimum detection levels, to be used for the measurement of chlorine or mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 shall be used until the requested alternative is approved.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart.

(c) At a minimum, you must obtain three composite fuel samples for each fuel type according to the procedures in paragraph (c)(1) or (2) of this section, or the methods listed in Table 6 to this subpart, or use an automated sampling mechanism that provides representative composite fuel samples for each fuel type that includes both coarse and fine material.

(1) If sampling from a belt (or screw) feeder, collect fuel samples according to paragraphs (c)(1)(i) and (ii) of this section.

(i) Stop the belt and withdraw a 6-inch wide sample from the full cross-section of the stopped belt to obtain a minimum two pounds of sample. You must collect all the material (fines and coarse) in the full cross-section. You must transfer the sample to a clean plastic bag.

(ii) Each composite sample will consist of a minimum of three samples collected at approximately equal one-hour intervals during the testing period for sampling during performance stack testing. For monthly sampling, each composite sample shall be collected at approximately equal 10-day intervals during the month.

(2) If sampling from a fuel pile or truck, you must collect fuel samples according to paragraphs (c)(2)(i) through (iii) of this section.

(i) For each composite sample, you must select a minimum of five sampling locations uniformly spaced over the surface of the pile.

(ii) At each sampling site, you must dig into the pile to a uniform depth of approximately 18 inches. You must insert a clean shovel into the hole and withdraw a sample, making sure that large pieces do not fall off during sampling; use the same shovel to collect all samples.

(iii) You must transfer all samples to a clean plastic bag for further processing.

(d) You must prepare each composite sample according to the procedures in paragraphs (d)(1) through (7) of this section.

(1) You must thoroughly mix and pour the entire composite sample over a clean plastic sheet.

(2) You must break large sample pieces (e.g., larger than 3 inches) into smaller sizes.

(3) You must make a pie shape with the entire composite sample and subdivide it into four equal parts.

(4) You must separate one of the quarter samples as the first subset.

(5) If this subset is too large for grinding, you must repeat the procedure in paragraph (d)(3) of this section with the quarter sample and obtain a one-quarter subset from this sample.

(6) You must grind the sample in a mill.

(7) You must use the procedure in paragraph (d)(3) of this section to obtain a one-quarter subsample for analysis. If the quarter sample is too large, subdivide it further using the same procedure.

(e) You must determine the concentration of pollutants in the fuel (mercury and/or chlorine and/or TSM) in units of pounds per million Btu of each composite sample for each fuel type according to the procedures in Table 6 to this subpart, for use in Equations 7, 8, and 9 of this subpart.

(f) To demonstrate that a gaseous fuel other than natural gas or refinery gas qualifies as an other gas 1 fuel, as defined in § 63.7575, you must conduct a fuel specification analyses for mercury according to the procedures in paragraphs (g) through (i) of this section and Table 6 to this subpart, as applicable, except as specified in paragraph (f)(1) through (4) of this section.

(1) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for natural gas or refinery gas.

(2) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gaseous fuels that are subject to another subpart of this part, part 60, part 61, or part 65.

(3) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section on gaseous fuels for units that are complying with the limits for units designed to burn gas 2 (other) fuels.

(4) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gas streams directly derived from natural gas at natural gas production sites or natural gas plants.

(g) You must develop and submit a site-specific fuel analysis plan for other gas 1 fuels to the EPA Administrator for review and approval according to the following procedures and requirements in paragraphs (g)(1) and (2) of this section.

(1) If you intend to use an alternative analytical method other than those required by Table 6 to this subpart, you must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in § 63.7510.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all gaseous fuel types other than those exempted from fuel specification analysis under (f)(1) through (3) of this section anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the notification of whether you or a fuel supplier will be conducting the fuel specification analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the samples if your procedures are different from the sampling methods contained in Table 6 to this subpart. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types. If multiple boilers or process heaters are fueled by a common fuel stream it is permissible to conduct a single gas specification at the common point of gas distribution.

(iv) For each anticipated fuel type, the analytical methods from Table 6 to this subpart, with the expected minimum detection levels, to be used for the measurement of mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 to this subpart shall be used until the requested alternative is approved.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart.

(h) You must obtain a single fuel sample for each fuel type according to the sampling procedures listed in Table 6 for fuel specification of gaseous fuels.

(i) You must determine the concentration in the fuel of mercury, in units of microgram per cubic meter, dry basis, of each sample for each other gas 1 fuel type according to the procedures in Table 6 to this subpart.

[78 FR 7167, Jan. 31, 2013]

**§ 63.7522 Can I use emissions averaging to comply with this subpart?**

(a) As an alternative to meeting the requirements of § 63.7500 for PM (or TSM), HCl, or mercury on a boiler or process heater-specific basis, if you have more than one existing boiler or process heater in any subcategories located at your facility, you may demonstrate compliance by emissions averaging, if your averaged emissions are not more than 90 percent of the applicable emission limit, according to the procedures in this section. You may not include new boilers or process heaters in an emissions average.

(b) For a group of two or more existing boilers or process heaters in the same subcategory that each vent to a separate stack, you may average PM (or TSM), HCl, or mercury emissions among existing units to demonstrate compliance with the limits in Table 2 to this subpart as specified in paragraph (b)(1) through (3) of this section, if you satisfy the requirements in paragraphs (c) through (g) of this section.

(1) You may average units using a CEMS or PM CPMS for demonstrating compliance.

(2) For mercury and HCl, averaging is allowed as follows:

(i) You may average among units in any of the solid fuel subcategories.

(ii) You may average among units in any of the liquid fuel subcategories.

(iii) You may average among units in a subcategory of units designed to burn gas 2 (other) fuels.

(iv) You may not average across the units designed to burn liquid, units designed to burn solid fuel, and units designed to burn gas 2 (other) subcategories.

(3) For PM (or TSM), averaging is only allowed between units within each of the following subcategories and you may not average across subcategories:

(i) Units designed to burn coal/solid fossil fuel.

(ii) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solids.

(iii) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solids.

(iv) Fluidized bed units designed to burn biomass/bio-based solid.

(v) Suspension burners designed to burn biomass/bio-based solid.

(vi) Dutch ovens/pile burners designed to burn biomass/bio-based solid.

(vii) Fuel Cells designed to burn biomass/bio-based solid.

(viii) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.

(ix) Units designed to burn heavy liquid fuel.

(x) Units designed to burn light liquid fuel.

(xi) Units designed to burn liquid fuel that are non-continental units.

(xii) Units designed to burn gas 2 (other) gases.

(c) For each existing boiler or process heater in the averaging group, the emission rate achieved during the initial compliance test for the HAP being averaged must not exceed the emission level that was being achieved on January 31, 2013 or the control technology employed during the initial compliance test must not be less effective for the HAP being averaged than the control technology employed on January 31, 2013.

(d) The averaged emissions rate from the existing boilers and process heaters participating in the emissions averaging option must not exceed 90 percent of the limits in Table 2 to this subpart at all times the affected units are operating following the compliance date specified in § 63.7495.

(e) You must demonstrate initial compliance according to paragraph (e)(1) or (2) of this section using the maximum rated heat input capacity or maximum steam generation capacity of each unit and the results of the initial performance tests or fuel analysis.

(1) You must use Equation 1a or 1b or 1c of this section to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option for that pollutant do not exceed the emission limits in Table 2 to this subpart. Use Equation 1a if you are complying with the emission limits on a heat input basis, use Equation 1b if you are complying with the emission limits on a steam generation (output) basis, and use Equation 1c if you are complying with the emission limits on a electric generation (output) basis.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Hm) \div \sum_{i=1}^{n} Hm \qquad \text{(Eq.1a)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c).

Hm = Maximum rated heat input capacity of unit, i, in units of million Btu per hour.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times So) \div \sum_{i=1}^{n} So \qquad \text{(Eq.1b)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c). If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, Eadj, determined according to § 63.7533 for that unit.

So = Maximum steam output capacity of unit, i, in units of million Btu per hour, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Eo) \div \sum_{i=1}^{n} Eo \qquad \text{(Eq.1c)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c). If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, Eadj, determined according to § 63.7533 for that unit.

Eo = Maximum electric generating output capacity of unit, i, in units of megawatt hour, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of determining the maximum rated heat input capacity of one or more boilers that generate steam, you may use Equation 2 of this section as an alternative to using Equation 1a of this section to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option do not exceed the emission limits for that pollutant in Table 2 to this subpart that are in pounds per million Btu of heat input.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Sm \times Cfi) \div \sum_{i=1}^{n} (Sm \times Cfi) \quad \text{(Eq. 2)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c).

Sm = Maximum steam generation capacity by unit, i, in units of pounds per hour.

Cfi = Conversion factor, calculated from the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for unit, i.

1.1 = Required discount factor.

(f) After the initial compliance demonstration described in paragraph (e) of this section, you must demonstrate compliance on a monthly basis determined at the end of every month (12 times per year) according to paragraphs (f)(1) through (3) of this section. The first monthly period begins on the compliance date specified in § 63.7495. If the affected source elects to collect monthly data for up the 11 months preceding the first monthly period, these additional data points can be used to compute the 12-month rolling average in paragraph (f)(3) of this section.

(1) For each calendar month, you must use Equation 3a or 3b or 3c of this section to calculate the average weighted emission rate for that month. Use Equation 3a and the actual heat input for the month for each existing unit participating in the emissions averaging option if you are complying with emission limits on a heat input basis. Use Equation 3b and the actual steam generation for the month if you are complying with the emission limits on a steam generation (output) basis. Use Equation 3c and the actual steam generation for the month if you are complying with the emission limits on a electrical generation (output) basis.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Hb) \div \sum_{i=1}^{n} Hb \quad \text{(Eq. 3a)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Hb = The heat input for that calendar month to unit, i, in units of million Btu.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times So) \div \sum_{i=1}^{n} So \quad \text{(Eq. 3b)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart. If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, $E_{adj}$ , determined according to § 63.7533 for that unit.

So = The steam output for that calendar month from unit, i, in units of million Btu, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Eo) \div \sum_{i=1}^{n} Eo \quad \text{(Eq. 3c)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart. If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, $E_{adj}$ , determined according to § 63.7533 for that unit.

Eo = The electric generating output for that calendar month from unit, i, in units of megawatt hour, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of monitoring heat input, you may use Equation 4 of this section as an alternative to using Equation 3a of this section to calculate the average weighted emission rate using the actual steam generation from the boilers participating in the emissions averaging option.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Sa \times Cfi) \div \sum_{i=1}^{n} (Sa \times Cfi) \quad \text{(Eq. 4)}$$

Where:

AveWeightedEmissions = average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Sa = Actual steam generation for that calendar month by boiler, i, in units of pounds.

Cfi = Conversion factor, as calculated during the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for boiler, i.

1.1 = Required discount factor.

(3) Until 12 monthly weighted average emission rates have been accumulated, calculate and report only the average weighted emission rate determined under paragraph (f)(1) or (2) of this section for each calendar month. After 12 monthly weighted average emission rates have been accumulated, for each subsequent calendar month, use Equation 5 of this section to calculate the 12-month rolling average of the monthly weighted average emission rates for the current calendar month and the previous 11 calendar months.

$$Eavg = \sum_{i=1}^{n} ERi \div 12 \quad \text{(Eq. 5)}$$

Where:

Eavg = 12-month rolling average emission rate, (pounds per million Btu heat input)

ERi = Monthly weighted average, for calendar month “i” (pounds per million Btu heat input), as calculated by paragraph (f)(1) or (2) of this section.

(g) You must develop, and submit upon request to the applicable Administrator for review and approval, an implementation plan for emission averaging according to the following procedures and requirements in paragraphs (g)(1) through (4) of this section.

(1) You must submit the implementation plan no later than 180 days before the date that the facility intends to demonstrate compliance using the emission averaging option.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vii) of this section in your implementation plan for all emission sources included in an emissions average:

(i) The identification of all existing boilers and process heaters in the averaging group, including for each either the applicable HAP emission level or the control technology installed as of January 31, 2013 and the date on which you are requesting emission averaging to commence;

(ii) The process parameter (heat input or steam generated) that will be monitored for each averaging group;

(iii) The specific control technology or pollution prevention measure to be used for each emission boiler or process heater in the averaging group and the date of its installation or application. If the pollution prevention measure reduces or eliminates emissions from multiple boilers or process heaters, the owner or operator must identify each boiler or process heater;

(iv) The test plan for the measurement of PM (or TSM), HCl, or mercury emissions in accordance with the requirements in § 63.7520;

(v) The operating parameters to be monitored for each control system or device consistent with § 63.7500 and Table 4, and a description of how the operating limits will be determined;

(vi) If you request to monitor an alternative operating parameter pursuant to § 63.7525, you must also include:

(A) A description of the parameter(s) to be monitored and an explanation of the criteria used to select the parameter(s); and

(B) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device; the frequency and content of monitoring, reporting, and recordkeeping requirements; and a demonstration, to the satisfaction of the Administrator, that the proposed monitoring frequency is sufficient to represent control device operating conditions; and

(vii) A demonstration that compliance with each of the applicable emission limit(s) will be achieved under representative operating load conditions. Following each compliance demonstration and until the next compliance demonstration, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(3) The Administrator shall review and approve or disapprove the plan according to the following criteria:

(i) Whether the content of the plan includes all of the information specified in paragraph (g)(2) of this section; and

(ii) Whether the plan presents sufficient information to determine that compliance will be achieved and maintained.

(4) The applicable Administrator shall not approve an emission averaging implementation plan containing any of the following provisions:

(i) Any averaging between emissions of differing pollutants or between differing sources; or

(ii) The inclusion of any emission source other than an existing unit in the same subcategories.

(h) For a group of two or more existing affected units, each of which vents through a single common stack, you may average PM (or TSM), HCl, or mercury emissions to demonstrate compliance with the limits for that pollutant in Table 2 to this subpart if you satisfy the requirements in paragraph (i) or (j) of this section.

(i) For a group of two or more existing units in the same subcategories, each of which vents through a common emissions control system to a common stack, that does not receive emissions from units in other subcategories or categories, you may treat such averaging group as a single existing unit for purposes of this subpart and comply with the requirements of this subpart as if the group were a single unit.

(j) For all other groups of units subject to the common stack requirements of paragraph (h) of this section, including situations where the exhaust of affected units are each individually controlled and then sent to a common stack, the owner or operator may elect to:

(1) Conduct performance tests according to procedures specified in § 63.7520 in the common stack if affected units from other subcategories vent to the common stack. The emission limits that the group must comply with are determined by the use of Equation 6 of this section.

$$En = \sum_{i=1}^{n} (ELi \times Hi) \div \sum_{i=1}^{n} Hi \qquad \text{(Eq. 6)}$$

Where:

En = HAP emission limit, pounds per million British thermal units (lb/MMBtu), parts per million (ppm), or nanograms per dry standard cubic meter (ng/dscm).

ELi = Appropriate emission limit from Table 2 to this subpart for unit i, in units of lb/MMBtu, ppm or ng/dscm.

Hi = Heat input from unit i, MMBtu.

(2) Conduct performance tests according to procedures specified in § 63.7520 in the common stack. If affected units and non-affected units vent to the common stack, the non-affected units must be shut down or vented to a different stack during the performance test unless the facility determines to demonstrate compliance with the non-affected units venting to the stack; and

(3) Meet the applicable operating limit specified in § 63.7540 and Table 8 to this subpart for each emissions control system (except that, if each unit venting to the common stack has an applicable opacity operating limit, then a single continuous opacity monitoring system may be located in the common stack instead of in each duct to the common stack).

(k) The common stack of a group of two or more existing boilers or process heaters in the same subcategories subject to paragraph (h) of this section may be treated as a separate stack for purposes of paragraph (b) of this section and included in an emissions averaging group subject to paragraph (b) of this section.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7168, Jan. 31, 2013]

**§ 63.7525 What are my monitoring, installation, operation, and maintenance requirements?**

(a) If your boiler or process heater is subject to a CO emission limit in Tables 1, 2, or 11 through 13 to this subpart, you must install, operate, and maintain an oxygen analyzer system, as defined in § 63.7575, or install, certify, operate and maintain continuous emission monitoring systems for CO and oxygen according to the procedures in paragraphs (a)(1) through (7) of this section.

(1) Install the CO CEMS and oxygen analyzer by the compliance date specified in § 63.7495. The CO and oxygen levels shall be monitored at the same location at the outlet of the boiler or process heater.

(2) To demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, you must install, certify, operate, and maintain a CO CEMS and an oxygen analyzer according to the applicable procedures under Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, the site-specific monitoring plan developed according to § 63.7505(d), and the requirements in § 63.7540(a)(8) and paragraph (a) of this section. Any boiler or process heater that has a CO CEMS that is compliant with Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, a site-specific monitoring plan developed according to § 63.7505(d), and the requirements in § 63.7540(a)(8) and paragraph (a) of this section must use the CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart.

(i) You must conduct a performance evaluation of each CO CEMS according to the requirements in § 63.8(e) and according to Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B.

(ii) During each relative accuracy test run of the CO CEMS, you must be collect emission data for CO concurrently (or within a 30- to 60-minute period) by both the CO CEMS and by Method 10, 10A, or 10B at 40 CFR part 60, appendix A-4. The relative accuracy testing must be at representative operating conditions.

(iii) You must follow the quality assurance procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) of Procedure 1 of appendix F to part 60. The measurement span value of the CO CEMS must be two times the applicable CO emission limit, expressed as a concentration.

(iv) Any CO CEMS that does not comply with § 63.7525(a) cannot be used to meet any requirement in this subpart to demonstrate compliance with a CO emission limit listed in Tables 1, 2, or 11 through 13 to this subpart.

(v) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(3) Complete a minimum of one cycle of CO and oxygen CEMS operation (sampling, analyzing, and data recording) for each successive 15-minute period. Collect CO and oxygen data concurrently. Collect at least four CO and oxygen CEMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CEMS calibration, quality assurance, or maintenance activities are being performed.

(4) Reduce the CO CEMS data as specified in § 63.8(g)(2).

(5) Calculate one-hour arithmetic averages, corrected to 3 percent oxygen from each hour of CO CEMS data in parts per million CO concentration. The one-hour arithmetic averages required shall be used to calculate the 30-day or 10-day rolling average emissions. Use Equation 19-19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A-7 for calculating the average CO concentration from the hourly values.

(6) For purposes of collecting CO data, operate the CO CEMS as specified in § 63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in § 63.7535(c). Periods when CO data are unavailable may constitute monitoring deviations as specified in § 63.7535(d).

(7) Operate an oxygen trim system with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test as the operating limit for oxygen according to Table 7 to this subpart.

(b) If your boiler or process heater is in the unit designed to burn coal/solid fossil fuel subcategory or the unit designed to burn heavy liquid subcategory and has an average annual heat input rate greater than 250 MMBtu per hour from solid fossil fuel and/or heavy liquid, and you demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, certify, maintain, and operate a PM CPMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (b)(1) through (4) of this section. As an alternative to use of a PM CPMS to demonstrate compliance with the PM limit, you may choose to use a PM CEMS. If you choose to use a PM CEMS to demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, certify, maintain, and operate a PM CEMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraph (b)(5) through (8) of this section. For other boilers or process heaters, you may elect to use a PM CPMS or PM CEMS operated in accordance with this section in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure). Owners of boilers and process heaters who elect to comply with the alternative TSM limit are not required to install a PM CPMS.

(1) Install, certify, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with § 63.7505(d), the requirements in § 63.7540(a)(9), and paragraphs (b)(1)(i) through (iii) of this section.

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation detection of PM in the exhaust gas or representative exhaust gas sample. The reportable measurement output from the PM CPMS must be expressed as milliamps.

(ii) The PM CPMS must have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.

(iii) The PM CPMS must be capable of detecting and responding to PM concentrations of no greater than 0.5 milligram per actual cubic meter.

(2) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(3) Collect PM CPMS hourly average output data for all boiler or process heater operating hours except as indicated in § 63.7535(a) through (d). Express the PM CPMS output as milliamps.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output data collected during all boiler or process heater operating hours (milliamps).

(5) Install, certify, operate, and maintain your PM CEMS according to the procedures in your approved site-specific monitoring plan developed in accordance with § 63.7505(d), the requirements in § 63.7540(a)(9), and paragraphs (b)(5)(i) through (iv) of this section.

(i) You shall conduct a performance evaluation of the PM CEMS according to the applicable requirements of § 60.8(e), and Performance Specification 11 at 40 CFR part 60, appendix B of this chapter.

(ii) During each PM correlation testing run of the CEMS required by Performance Specification 11 at 40 CFR part 60, appendix B of this chapter, you shall collect PM and oxygen (or carbon dioxide) data concurrently (or within a 30-to 60-minute period) by both the CEMS and conducting performance tests using Method 5 at 40 CFR part 60, appendix A-3 or Method 17 at 40 CFR part 60, appendix A-6 of this chapter.

(iii) You shall perform quarterly accuracy determinations and daily calibration drift tests in accordance with Procedure 2 at 40 CFR part 60, appendix F of this chapter. You must perform Relative Response Audits annually and perform Response Correlation Audits every 3 years.

(iv) Within 60 days after the date of completing each CEMS relative accuracy test audit or performance test conducted to demonstrate compliance with this subpart, you must submit the relative accuracy test audit data and performance test data to the EPA by successfully submitting the data electronically into the EPA's Central Data Exchange by using the Electronic Reporting Tool (see *http://www.epa.gov/ttn/chief/ert/erttool.html/* ).

(6) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(7) Collect PM CEMS hourly average output data for all boiler or process heater operating hours except as indicated in § 63.7535(a) through (d).

(8) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all boiler or process heater operating hours.

(c) If you have an applicable opacity operating limit in this rule, and are not otherwise required or elect to install and operate a PM CPMS, PM CEMS, or a bag leak detection system, you must install, operate, certify and maintain each COMS according to the procedures in paragraphs (c)(1) through (7) of this section by the compliance date specified in § 63.7495.

(1) Each COMS must be installed, operated, and maintained according to Performance Specification 1 at appendix B to part 60 of this chapter.

(2) You must conduct a performance evaluation of each COMS according to the requirements in § 63.8(e) and according to Performance Specification 1 at appendix B to part 60 of this chapter.

(3) As specified in § 63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) The COMS data must be reduced as specified in § 63.8(g)(2).

(5) You must include in your site-specific monitoring plan procedures and acceptance criteria for operating and maintaining each COMS according to the requirements in § 63.8(d). At a minimum, the monitoring plan must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS.

(6) You must operate and maintain each COMS according to the requirements in the monitoring plan and the requirements of § 63.8(e). You must identify periods the COMS is out of control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit. Any 6-minute period for which the monitoring system is out of control and data are not available for a required calculation constitutes a deviation from the monitoring requirements.

(7) You must determine and record all the 6-minute averages (and daily block averages as applicable) collected for periods during which the COMS is not out of control.

(d) If you have an operating limit that requires the use of a CMS other than a PM CPMS or COMS, you must install, operate, and maintain each CMS according to the procedures in paragraphs (d)(1) through (5) of this section by the compliance date specified in § 63.7495.

(1) The CPMS must complete a minimum of one cycle of operation every 15-minutes. You must have a minimum of four successive cycles of operation, one representing each of the four 15-minute periods in an hour, to have a valid hour of data.

(2) You must operate the monitoring system as specified in § 63.7535(b), and comply with the data calculation requirements specified in § 63.7535(c).

(3) Any 15-minute period for which the monitoring system is out-of-control and data are not available for a required calculation constitutes a deviation from the monitoring requirements. Other situations that constitute a monitoring deviation are specified in § 63.7535(d).

(4) You must determine the 30-day rolling average of all recorded readings, except as provided in § 63.7535(c).

(5) You must record the results of each inspection, calibration, and validation check.

(e) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (d) and (e)(1) through (4) of this section.

(1) You must install the flow sensor and other necessary equipment in a position that provides a representative flow.

(2) You must use a flow sensor with a measurement sensitivity of no greater than 2 percent of the design flow rate.

(3) You must minimize, consistent with good engineering practices, the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(4) You must 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.

(f) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (d) and (f)(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.* , PM scrubber pressure drop).

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion consistent with good engineering practices.

(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 you monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(g) If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (d) and (g)(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.

(h) If you have an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator (ESP) operated with a wet scrubber, you must meet the requirements in paragraphs (h)(1) and (2) of this section.

(1) Install sensors to measure (secondary) voltage and current to the 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.

(i) 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 (d) and (i)(1) through (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.

(j) If you are not required to use a PM CPMS and elect to use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate the bag leak detection system as specified in paragraphs (j)(1) through (6) of this section.

(1) You must install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute PM loadings for each exhaust stack, roof vent, or compartment (e.g., for a positive pressure fabric filter) of the fabric filter.

(2) Conduct a performance evaluation of the bag leak detection system in accordance with your monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (incorporated by reference, see § 63.14).

(3) Use a bag leak detection system certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter or less.

(4) Use a bag leak detection system equipped with a device to record continuously the output signal from the sensor.

(5) Use a bag leak detection system equipped with a system that will alert plant operating personnel when an increase in relative PM emissions over a preset level is detected. The alert must easily recognizable (e.g., heard or seen) by plant operating personnel.

(6) Where multiple bag leak detectors are required, the system's instrumentation and alert may be shared among detectors.

(k) For each unit that meets the definition of limited-use boiler or process heater, you must keep fuel use records for the days the boiler or process heater was operating.

(l) For each unit for which you decide to demonstrate compliance with the mercury or HCl emissions limits in Tables 1 or 2 or 11 through 13 of this subpart by use of a CEMS for mercury or HCl, you must install, certify, maintain, and operate a CEMS measuring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (l)(1) through (8) of this section. For HCl, this option for an affected unit takes effect on the date a final performance specification for a HCl CEMS is published in the FEDERAL REGISTER or the date of approval of a site-specific monitoring plan.

(1) Notify the Administrator one month before starting use of the CEMS, and notify the Administrator one month before stopping use of the CEMS.

(2) Each CEMS shall be installed, certified, operated, and maintained according to the requirements in § 63.7540(a)(14) for a mercury CEMS and § 63.7540(a)(15) for a HCl CEMS.

(3) For a new unit, you must complete the initial performance evaluation of the CEMS by the latest of the dates specified in paragraph (l)(3)(i) through (iii) of this section.

(i) No later than July 30, 2013.

(ii) No later 180 days after the date of initial startup.

(iii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(4) For an existing unit, you must complete the initial performance evaluation by the latter of the two dates specified in paragraph (l)(4)(i) and (ii) of this section.

(i) No later than July 29, 2016.

(ii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(5) Compliance with the applicable emissions limit shall be determined based on the 30-day rolling average of the hourly arithmetic average emissions rates using the continuous monitoring system outlet data. The 30-day rolling arithmetic average emission rate (lb/MMBtu) shall be calculated using the equations in EPA Reference Method 19 at 40 CFR part 60, appendix A-7, but substituting the mercury or HCl concentration for the pollutant concentrations normally used in Method 19.

(6) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis. Collect at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

(7) The one-hour arithmetic averages required shall be expressed in lb/MMBtu and shall be used to calculate the boiler 30-day and 10-day rolling average emissions.

(8) You are allowed to substitute the use of the PM, mercury or HCl CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with the PM, mercury or HCl emissions limit, and if you are using an acid gas wet scrubber or dry sorbent injection control technology to comply with the HCl emission limit, you are allowed to substitute the use of a sulfur dioxide ($SO_2$ ) CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with HCl emissions limit.

(m) If your unit is subject to a HCl emission limit in Tables 1, 2, or 11 through 13 of this subpart and you have an acid gas wet scrubber or dry sorbent injection control technology and you use an $SO_2$ CEMS, you must install the monitor at the outlet of the boiler or process heater, downstream of all emission control devices, and you must install, certify, operate, and maintain the CEMS according to part 75 of this chapter.

(1) The $SO_2$ CEMS must be installed by the compliance date specified in § 63.7495.

(2) For on-going quality assurance (QA), the $SO_2$ CEMS must meet the applicable daily, quarterly, and semiannual or annual requirements in sections 2.1 through 2.3 of appendix B to part 75 of this chapter, with the following addition: You must perform the linearity checks required in section 2.2 of appendix B to part 75 of this chapter if the $SO_2$ CEMS has a span value of 30 ppm or less.

(3) For a new unit, the initial performance evaluation shall be completed no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, the initial performance evaluation shall be completed no later than July 29, 2016.

(4) For purposes of collecting $SO_2$ data, you must operate the $SO_2$ CEMS as specified in § 63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in § 63.7535(c). Periods when $SO_2$ data are unavailable may constitute monitoring deviations as specified in § 63.7535(d).

(5) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis.

(6) Use only unadjusted, quality-assured $SO_2$ concentration values in the emissions calculations; do not apply bias adjustment factors to the part 75 $SO_2$ data and do not use part 75 substitute data values.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7171, Jan. 31, 2013]

**§ 63.7530 How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?**

(a) You must demonstrate initial compliance with each emission limit that applies to you by conducting initial performance tests and fuel analyses and establishing operating limits, as applicable, according to § 63.7520, paragraphs (b) and (c) of this section, and Tables 5 and 7 to this subpart. The requirement to conduct a fuel analysis is not applicable for units that burn a single type of fuel, as specified by § 63.7510(a)(2)(i). If applicable, you must also install, operate, and maintain all applicable CMS (including CEMS, COMS, and CPMS) according to § 63.7525.

(b) If you demonstrate compliance through performance testing, you must establish each site-specific operating limit in Table 4 to this subpart that applies to you according to the requirements in § 63.7520, Table 7 to this subpart, and paragraph (b)(4) of this section, as applicable. You must also conduct fuel analyses according to § 63.7521 and establish maximum fuel pollutant input levels according to paragraphs (b)(1) through (3) of this section, as applicable, and as specified in § 63.7510(a)(2). (Note that § 63.7510(a)(2) exempts certain fuels from the fuel analysis requirements.) However, if you switch fuel(s) and cannot show that the new fuel(s) does (do) not increase the

chlorine, mercury, or TSM input into the unit through the results of fuel analysis, then you must repeat the performance test to demonstrate compliance while burning the new fuel(s).

(1) You must establish the maximum chlorine fuel input (Clinput) during the initial fuel analysis according to the procedures in paragraphs (b)(1)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of chlorine.

(ii) During the fuel analysis for hydrogen chloride, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of chlorine, and the average chlorine concentration of each fuel type burned (Ci).

(iii) You must establish a maximum chlorine input level using Equation 7 of this section.

$$Clinput = \sum_{i=1}^{n} (Ci \times Qi) \quad \text{(Eq. 7)}$$

Where:

Clinput = Maximum amount of chlorine entering the boiler or process heater through fuels burned in units of pounds per million Btu.

Ci = Arithmetic average concentration of chlorine in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

(2) You must establish the maximum mercury fuel input level (Mercuryinput) during the initial fuel analysis using the procedures in paragraphs (b)(2)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of mercury.

(ii) During the compliance demonstration for mercury, you must determine the fraction of total heat input for each fuel burned (Qi) based on the fuel mixture that has the highest content of mercury, and the average mercury concentration of each fuel type burned (HGi).

(iii) You must establish a maximum mercury input level using Equation 8 of this section.

$$Mercuryinput = \sum_{i=1}^{n} (HGi \times Qi) \quad \text{(Eq. 8)}$$

Where:

Mercuryinput = Maximum amount of mercury entering the boiler or process heater through fuels burned in units of pounds per million Btu.

HGi = Arithmetic average concentration of mercury in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types during the performance test, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of mercury.

(3) If you opt to comply with the alternative TSM limit, you must establish the maximum TSM fuel input (TSMinput) for solid or liquid fuels during the initial fuel analysis according to the procedures in paragraphs (b)(3)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of TSM.

(ii) During the fuel analysis for TSM, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of TSM, and the average TSM concentration of each fuel type burned (TSMi).

(iii) You must establish a maximum TSM input level using Equation 9 of this section.

$$TSMinput = \sum_{i=1}^{n} (TSMi \times Qi) \qquad \text{(Eq. 9)}$$

Where:

TSMinput = Maximum amount of TSM entering the boiler or process heater through fuels burned in units of pounds per million Btu.

TSMi = Arithmetic average concentration of TSM in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of TSM. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of TSM.

(4) You must establish parameter operating limits according to paragraphs (b)(4)(i) through (ix) of this section. As indicated in Table 4 to this subpart, you are not required to establish and comply with the operating parameter limits when you are using a CEMS to monitor and demonstrate compliance with the applicable emission limit for that control device parameter.

(i) For a wet acid gas scrubber, you must establish the minimum scrubber effluent pH and liquid flow rate as defined in § 63.7575, as your operating limits during the performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for HCl and mercury emissions, you must establish one set of minimum scrubber effluent pH, liquid flow rate, and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate operating limit at the higher of the minimum values established during the performance tests.

(ii) For any particulate control device (e.g., ESP, particulate wet scrubber, fabric filter) for which you use a PM CPMS, you must establish your PM CPMS operating limit and determine compliance with it according to paragraphs (b)(4)(ii)(A) through (F) of this section.

(A) Determine your operating limit as the average PM CPMS output value recorded during the most recent performance test run demonstrating compliance with the filterable PM emission limit or at the PM CPMS output value

corresponding to 75 percent of the emission limit if your PM performance test demonstrates compliance below 75 percent of the emission limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

( *1* ) Your PM CPMS must provide a 4-20 milliamp output and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps.

( *2* ) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to at least two times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit.

( *3* ) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all your PM CPMS output values for three corresponding 2-hour Method 5I test runs).

(B) If the average of your three PM performance test runs are below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or performance test with the procedures in paragraphs (b)(4)(ii)(B)( *1* ) through ( *4* ) of this section.

( *1* ) Determine your instrument zero output with one of the following procedures:

( *i* ) Zero point data for *in-situ* instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench.

( *ii* ) Zero point data for *extractive* instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air.

( *iii* ) The zero point may also be established by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept.

( *iv* ) If none of the steps in paragraphs (b)(4)(ii)(B)( *1* )( *i* ) through ( *iii* ) of this section are possible, you must use a zero output value provided by the manufacturer.

( *2* ) Determine your PM CPMS instrument average in milliamps, and the average of your corresponding three PM compliance test runs, using equation 10.

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} X_{1,i} \quad \bar{y} = \frac{1}{n}\sum_{i=1}^{n} Y_1 \qquad \text{(Eq. 10)}$$

Where:

$X_1$ = the PM CPMS data points for the three runs constituting the performance test,

$Y_1$ = the PM concentration value for the three runs constituting the performance test, and

n = the number of data points.

( *3* ) With your instrument zero expressed in milliamps, your three run average PM CPMS milliamp value, and your three run average PM concentration from your three compliance tests, determine a relationship of lb/MMBtu per milliamp with equation 11.

$$R = \frac{Y_1}{(X_1 - z)} \qquad \text{(Eq. 11)}$$

Where:

R = the relative lb/MMBtu per milliamp for your PM CPMS,

$Y_1$ = the three run average lb/MMBtu PM concentration,

$X_1$ = the three run average milliamp output from you PM CPMS, and

z = the milliamp equivalent of your instrument zero determined from (B)(i).

( *4* ) Determine your source specific 30-day rolling average operating limit using the lb/MMBtu per milliamp value from Equation 11 in equation 12, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit.

$$O_l = z + \frac{0.75(L)}{R} \qquad \text{(Eq. 12)}$$

Where:

$O_l$ = the operating limit for your PM CPMS on a 30-day rolling average, in milliamps.

L = your source emission limit expressed in lb/MMBtu,

z = your instrument zero in milliamps, determined from (B)(i), and

R = the relative lb/MMBtu per milliamp for your PM CPMS, from Equation 11.

(C) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your 30-day rolling average operating limit by averaging the PM CPMS milliamp output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using equation 13 and you must submit all compliance test and PM CPMS data according to the reporting requirements in paragraph (b)(4)(ii)(F) of this section.

$$O_h = \frac{1}{n}\sum_{i=1}^{n} X_1 \qquad \text{(Eq. 13)}$$

Where:

$X_1$ = the PM CPMS data points for all runs i,

n = the number of data points, and

$O_h$ = your site specific operating limit, in milliamps.

(D) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic

average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis, updated at the end of each new operating hour. Use Equation 14 to determine the 30-day rolling average.

$$30-\text{day} = \frac{\sum_{i=1}^{n} Hpvi}{n} \qquad \text{(Eq. 14)}$$

Where:

30-day = 30-day average.

Hpvi = is the hourly parameter value for hour i

n = is the number of valid hourly parameter values collected over the previous 720 operating hours.

(E) Use EPA Method 5 of appendix A to part 60 of this chapter to determine PM emissions. For each performance test, conduct three separate runs under the conditions that exist when the affected source is operating at the highest load or capacity level reasonably expected to occur. Conduct each test run to collect a minimum sample volume specified in Tables 1, 2, or 11 through 13 to this subpart, as applicable, for determining compliance with a new source limit or an existing source limit. Calculate the average of the results from three runs to determine compliance. You need not determine the PM collected in the impingers (“back half”) of the Method 5 particulate sampling train to demonstrate compliance with the PM standards of this subpart. This shall not preclude the permitting authority from requiring a determination of the “back half” for other purposes.

(F) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g. beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run. (iii) For a particulate wet scrubber, you must establish the minimum pressure drop and liquid flow rate as defined in § 63.7575, as your operating limits during the three-run performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for PM and TSM emissions, you must establish one set of minimum scrubber liquid flow rate and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate and pressure drop operating limits at the higher of the minimum values established during the performance tests.

(iii) For an electrostatic precipitator (ESP) operated with a wet scrubber, you must establish the minimum total secondary electric power input, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit. (These operating limits do not apply to ESP that are operated as dry controls without a wet scrubber.)

(iv) For a dry scrubber, you must establish the minimum sorbent injection rate for each sorbent, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(v) For activated carbon injection, you must establish the minimum activated carbon injection rate, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(vi) The operating limit for boilers or process heaters with fabric filters that demonstrate continuous compliance through bag leak detection systems is that a bag leak detection system be installed according to the requirements in § 63.7525, and that each fabric filter must be operated such that the bag leak detection system alert is not activated more than 5 percent of the operating time during a 6-month period.

(vii) For a minimum oxygen level, if you conduct multiple performance tests, you must set the minimum oxygen level at the lower of the minimum values established during the performance tests.

(viii) The operating limit for boilers or process heaters that demonstrate continuous compliance with the HCl emission limit using a $SO_2$ CEMS is to install and operate the $SO_2$ according to the requirements in § 63.7525(m) establish a maximum $SO_2$ emission rate equal to the highest hourly average $SO_2$ measurement during the most recent three-run performance test for HCl.

(c) If you elect to demonstrate compliance with an applicable emission limit through fuel analysis, you must conduct fuel analyses according to § 63.7521 and follow the procedures in paragraphs (c)(1) through (5) of this section.

(1) If you burn more than one fuel type, you must determine the fuel mixture you could burn in your boiler or process heater that would result in the maximum emission rates of the pollutants that you elect to demonstrate compliance through fuel analysis.

(2) You must determine the 90th percentile confidence level fuel pollutant concentration of the composite samples analyzed for each fuel type using the one-sided t-statistic test described in Equation 15 of this section.

$$P90 = mean + (SD \times t) \quad \text{(Eq. 15)}$$

Where:

P90 = 90th percentile confidence level pollutant concentration, in pounds per million Btu.

Mean = Arithmetic average of the fuel pollutant concentration in the fuel samples analyzed according to § 63.7521, in units of pounds per million Btu.

SD = Standard deviation of the mean of pollutant concentration in the fuel samples analyzed according to § 63.7521, in units of pounds per million Btu. SD is calculated as the sample standard deviation divided by the square root of the number of samples.

t = t distribution critical value for 90th percentile ($t_{0.1}$ ) probability for the appropriate degrees of freedom (number of samples minus one) as obtained from a t-Distribution Critical Value Table.

(3) To demonstrate compliance with the applicable emission limit for HCl, the HCl emission rate that you calculate for your boiler or process heater using Equation 16 of this section must not exceed the applicable emission limit for HCl.

$$HCl = \sum_{i=1}^{n} (Ci90 \times Qi \times 1.028) \quad \text{(Eq. 16)}$$

Where:

HCl = HCl emission rate from the boiler or process heater in units of pounds per million Btu.

Ci90 = 90th percentile confidence level concentration of chlorine in fuel type, i, in units of pounds per million Btu as calculated according to Equation 11 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

1.028 = Molecular weight ratio of HCl to chlorine.

(4) To demonstrate compliance with the applicable emission limit for mercury, the mercury emission rate that you calculate for your boiler or process heater using Equation 17 of this section must not exceed the applicable emission limit for mercury.

$$Mercury = \sum_{i=1}^{n} \left( Hgi90 \times Qi \right) \quad \text{(Eq. 17)}$$

Where:

Mercury = Mercury emission rate from the boiler or process heater in units of pounds per million Btu.

Hgi90 = 90th percentile confidence level concentration of mercury in fuel, i, in units of pounds per million Btu as calculated according to Equation 11 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest mercury content.

(5) To demonstrate compliance with the applicable emission limit for TSM for solid or liquid fuels, the TSM emission rate that you calculate for your boiler or process heater from solid fuels using Equation 18 of this section must not exceed the applicable emission limit for TSM.

$$Metals = \sum_{i=1}^{n} \left( TSM90i \times Qi \right) \quad \text{(Eq. 18)}$$

Where:

Metals = TSM emission rate from the boiler or process heater in units of pounds per million Btu.

TSMi90 = 90th percentile confidence level concentration of TSM in fuel, i, in units of pounds per million Btu as calculated according to Equation 11 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest TSM content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest TSM content.

(d) If you own or operate an existing unit with a heat input capacity of less than 10 million Btu per hour or a unit in the unit designed to burn gas 1 subcategory, you must submit a signed statement in the Notification of Compliance Status report that indicates that you conducted a tune-up of the unit.

(e) You must include with the Notification of Compliance Status a signed certification that the energy assessment was completed according to Table 3 to this subpart and is an accurate depiction of your facility at the time of the assessment.

(f) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.7545(e).

(g) If you elect to demonstrate that a gaseous fuel meets the specifications of another gas 1 fuel as defined in § 63.7575, you must conduct an initial fuel specification analyses according to § 63.7521(f) through (i) and according to the frequency listed in § 63.7540(c) and maintain records of the results of the testing as outlined in § 63.7555(g). For samples where the initial mercury specification has not been exceeded, you will include a signed certification with the Notification of Compliance Status that the initial fuel specification test meets the gas specification outlined in the definition of other gas 1 fuels.

(h) If you own or operate a unit subject to emission limits in Tables 1 or 2 or 11 through 13 to this subpart, you must meet the work practice standard according to Table 3 of this subpart. During startup and shutdown, you must only follow the work practice standards according to item 5 of Table 3 of this subpart.

(i) If you opt to comply with the alternative $SO_2$ CEMS operating limit in Tables 4 and 8 to this subpart, you may do so only if your affected boiler or process heater:

(1) Has a system using wet scrubber or dry sorbent injection and $SO_2$ CEMS installed on the unit; and

(2) At all times, you operate the wet scrubber or dry sorbent injection for acid gas control on the unit consistent with § 63.7500(a)(3); and

(3) You establish a unit-specific maximum $SO_2$ operating limit by collecting the minimum hourly $SO_2$ emission rate on the $SO_2$ CEMS during the paired 3-run test for HCl. The maximum $SO_2$ operating limit is equal to the highest hourly average $SO_2$ concentration measured during the most recent HCl performance test.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7174, Jan. 31, 2013]

**§ 63.7533 Can I use efficiency credits earned from implementation of energy conservation measures to comply with this subpart?**

(a) If you elect to comply with the alternative equivalent output-based emission limits, instead of the heat input-based limits listed in Table 2 to this subpart, and you want to take credit for implementing energy conservation measures identified in an energy assessment, you may demonstrate compliance using efficiency credits according to the procedures in this section. You may use this compliance approach for an existing affected boiler for demonstrating initial compliance according to § 63.7522(e) and for demonstrating monthly compliance according to § 63.7522(f). Owners or operators using this compliance approach must establish an emissions benchmark, calculate and document the efficiency credits, develop an Implementation Plan, comply with the general reporting requirements, and apply the efficiency credit according to the procedures in paragraphs (b) through (f) of this section. You cannot use this compliance approach for a new or reconstructed affected boiler. Additional guidance from the Department of Energy on efficiency credits is available at: *http://www.epa.gov/ttn/atw/boiler/boilerpg.html* .

(b) For each existing affected boiler for which you intend to apply emissions credits, establish a benchmark from which emission reduction credits may be generated by determining the actual annual fuel heat input to the affected boiler before initiation of an energy conservation activity to reduce energy demand ( *i.e.,* fuel usage) according to paragraphs (b)(1) through (4) of this section. The benchmark shall be expressed in trillion Btu per year heat input.

(1) The benchmark from which efficiency credits may be generated shall be determined by using the most representative, accurate, and reliable process available for the source. The benchmark shall be established for a one-year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

(2) Determine the starting point from which to measure progress. Inventory all fuel purchased and generated on-site (off-gases, residues) in physical units (MMBtu, million cubic feet, etc.).

(3) Document all uses of energy from the affected boiler. Use the most recent data available.

(4) Collect non-energy related facility and operational data to normalize, if necessary, the benchmark to current operations, such as building size, operating hours, etc. If possible, use actual data that are current and timely rather than estimated data.

(c) Efficiency credits can be generated if the energy conservation measures were implemented after January 1, 2008 and if sufficient information is available to determine the appropriate value of credits.

(1) The following emission points cannot be used to generate efficiency credits:

(i) Energy conservation measures implemented on or before January 1, 2008, unless the level of energy demand reduction is increased after January 1, 2008, in which case credit will be allowed only for change in demand reduction achieved after January 1, 2008.

(ii) Efficiency credits on shut-down boilers. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to energy conservation measures identified in the energy assessment. In this case, the bench established for the affected boiler to which the credits from the shutdown will be applied must be revised to include the benchmark established for the shutdown boiler.

(2) For all points included in calculating emissions credits, the owner or operator shall:

(i) Calculate annual credits for all energy demand points. Use Equation 19 to calculate credits. Energy conservation measures that meet the criteria of paragraph (c)(1) of this section shall not be included, except as specified in paragraph (c)(1)(i) of this section.

(3) Credits are generated by the difference between the benchmark that is established for each affected boiler, and the actual energy demand reductions from energy conservation measures implemented after January 1, 2008. Credits shall be calculated using Equation 19 of this section as follows:

(i) The overall equation for calculating credits is:

$$ECredits = \left( \sum_{i=1}^{n} EIS_{iactual} \right) \div EI_{baseline} \quad \text{(Eq. 19)}$$

Where:

ECredits = Energy Input Savings for all energy conservation measures implemented for an affected boiler, expressed as a decimal fraction of the baseline energy input.

$EIS_{iactual}$ = Energy Input Savings for each energy conservation measure, i, implemented for an affected boiler, million Btu per year.

$EI_{baseline}$ = Energy Input baseline for the affected boiler, million Btu per year.

n = Number of energy conservation measures included in the efficiency credit for the affected boiler.

(ii) [Reserved]

(d) The owner or operator shall develop, and submit for approval upon request by the Administrator, an Implementation Plan containing all of the information required in this paragraph for all boilers to be included in an efficiency credit approach. The Implementation Plan shall identify all existing affected boilers to be included in applying the efficiency credits. The Implementation Plan shall include a description of the energy conservation measures implemented and the energy savings generated from each measure and an explanation of the criteria used for determining that savings. If requested, you must submit the implementation plan for efficiency credits to the Administrator for review and approval no later than 180 days before the date on which the facility intends to demonstrate compliance using the efficiency credit approach.

(e) The emissions rate as calculated using Equation 20 of this section from each existing boiler participating in the efficiency credit option must be in compliance with the limits in Table 2 to this subpart at all times the affected unit is operating, following the compliance date specified in § 63.7495.

(f) You must use Equation 20 of this section to demonstrate initial compliance by demonstrating that the emissions from the affected boiler participating in the efficiency credit compliance approach do not exceed the emission limits in Table 2 to this subpart.

$$E_{adj} = E_{m} \times (1 - ECredits) \quad \text{(Eq. 20)}$$

Where:

$E_{adj}$ = Emission level adjusted by applying the efficiency credits earned, lb per million Btu steam output (or lb per MWh) for the affected boiler.

$E_m$ = Emissions measured during the performance test, lb per million Btu steam output (or lb per MWh) for the affected boiler.

ECredits = Efficiency credits from Equation 19 for the affected boiler.

(g) As part of each compliance report submitted as required under § 63.7550, you must include documentation that the energy conservation measures implemented continue to generate the credit for use in demonstrating compliance with the emission limits.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7178, Jan. 31, 2013]

**Continuous Compliance Requirements**

**§ 63.7535 Is there a minimum amount of monitoring data I must obtain?**

(a) You must monitor and collect data according to this section and the site-specific monitoring plan required by § 63.7505(d).

(b) You must operate the monitoring system and collect data at all required intervals at all times that each boiler or process heater is operating and compliance is required, except for periods of monitoring system malfunctions or out of control periods (see § 63.8(c)(7) of this part), and required monitoring system quality assurance or control activities, including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.

(c) You may not use data recorded during monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in data averages and calculations used to report emissions or operating levels. You must record and make available upon request results of CMS performance audits and dates and duration of periods when the CMS is out of control to completion of the corrective actions necessary to return the CMS to operation consistent with your site-specific monitoring plan. You must use all the data collected during all other periods in assessing compliance and the operation of the control device and associated control system.

(d) Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, system accuracy audits, calibration checks, and required zero and span adjustments), failure to collect required data is a deviation of the monitoring requirements. In calculating monitoring results, do not use any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities. You must calculate monitoring results using all other monitoring data collected while the process is operating. You must report all periods when the monitoring system is out of control in your annual report.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7179, Jan. 31, 2013]

**§ 63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?**

(a) You must demonstrate continuous compliance with each emission limit in Tables 1 and 2 or 11 through 13 to this subpart, the work practice standards in Table 3 to this subpart, and the operating limits in Table 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (19) of this section.

(1) Following the date on which the initial compliance demonstration is completed or is required to be completed under §§ 63.7 and 63.7510, whichever date comes first, operation above the established maximum or below the established minimum operating limits shall constitute a deviation of established operating limits listed in Table 4 of this subpart except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests.

(2) As specified in § 63.7550(c), you must keep records of the type and amount of all fuels burned in each boiler or process heater during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in either of the following:

(i) Lower emissions of HCl, mercury, and TSM than the applicable emission limit for each pollutant, if you demonstrate compliance through fuel analysis.

(ii) Lower fuel input of chlorine, mercury, and TSM than the maximum values calculated during the last performance test, if you demonstrate compliance through performance testing.

(3) If you demonstrate compliance with an applicable HCl emission limit through fuel analysis for a solid or liquid fuel and you plan to burn a new type of solid or liquid fuel, you must recalculate the HCl emission rate using Equation 12 of § 63.7530 according to paragraphs (a)(3)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the HCl emission rate.

(i) You must determine the chlorine concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of chlorine.

(iii) Recalculate the HCl emission rate from your boiler or process heater under these new conditions using Equation 12 of § 63.7530. The recalculated HCl emission rate must be less than the applicable emission limit.

(4) If you demonstrate compliance with an applicable HCl emission limit through performance testing and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum chlorine input using Equation 7 of § 63.7530. If the results of recalculating the maximum chlorine input using Equation 7 of § 63.7530 are greater than the maximum chlorine input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the HCl emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). In recalculating the maximum chlorine input and establishing the new operating limits, you are not required to conduct fuel analyses for and include the fuels described in § 63.7510(a)(2)(i) through (iii).

(5) If you demonstrate compliance with an applicable mercury emission limit through fuel analysis, and you plan to burn a new type of fuel, you must recalculate the mercury emission rate using Equation 13 of § 63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(i) You must determine the mercury concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of mercury.

(iii) Recalculate the mercury emission rate from your boiler or process heater under these new conditions using Equation 13 of § 63.7530. The recalculated mercury emission rate must be less than the applicable emission limit.

(6) If you demonstrate compliance with an applicable mercury emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum mercury input using Equation 8 of § 63.7530. If the results of recalculating the maximum mercury input using Equation 8 of § 63.7530 are higher than the maximum mercury input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the mercury emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(7) If your unit is controlled with a fabric filter, and you demonstrate continuous compliance using a bag leak detection system, you must initiate corrective action within 1 hour of a bag leak detection system alert and complete corrective actions as soon as practical, and operate and maintain the fabric filter system such that the periods which would cause an alert are no more than 5 percent of the operating time during a 6-month period. You must also keep records of the date, time, and duration of each alert, the time corrective action was initiated and completed, and a brief description of the cause of the alert and the corrective action taken. You must also record the percent of the operating time during each 6-month period that the conditions exist for an alert. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alert time is counted. If corrective action is required, each alert shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alert time shall be counted as the actual amount of time taken to initiate corrective action.

(8) To demonstrate compliance with the applicable alternative CO CEMS emission limit listed in Tables 1, 2, or 11 through 13 to this subpart, you must meet the requirements in paragraphs (a)(8)(i) through (iv) of this section.

(i) Continuously monitor CO according to §§ 63.7525(a) and 63.7535.

(ii) Maintain a CO emission level below or at your applicable alternative CO CEMS-based standard in Tables 1 or 2 or 11 through 13 to this subpart at all times the affected unit is operating.

(iii) Keep records of CO levels according to § 63.7555(b).

(iv) You must record and make available upon request results of CO CEMS performance audits, dates and duration of periods when the CO CEMS is out of control to completion of the corrective actions necessary to return the CO CEMS to operation consistent with your site-specific monitoring plan.

(9) The owner or operator of a boiler or process heater using a PM CPMS or a PM CEMS to meet requirements of this subpart shall install, certify, operate, and maintain the PM CPMS or PM CEMS in accordance with your site-specific monitoring plan as required in § 63.7505(d).

(10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this section. This frequency does not apply to limited-use boilers and process heaters, as defined in § 63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any $NO_X$ requirement to which the unit is subject;

(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

(vi) Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,

(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(B) A description of any corrective actions taken as a part of the tune-up; and

(C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

(11) If your boiler or process heater has a heat input capacity of less than 10 million Btu per hour (except as specified in paragraph (a)(12) of this section), you must conduct a biennial tune-up of the boiler or process heater as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance.

(12) If your boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in § 63.7575, you must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance. You may delay the burner inspection specified in paragraph (a)(10)(i) of this section until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

(13) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

(14) If you are using a CEMS measuring mercury emissions to meet requirements of this subpart you must install, certify, operate, and maintain the mercury CEMS as specified in paragraphs (a)(14)(i) and (ii) of this section.

(i) Operate the mercury CEMS in accordance with performance specification 12A of 40 CFR part 60, appendix B or operate a sorbent trap based integrated monitor in accordance with performance specification 12B of 40 CFR part 60, appendix B. The duration of the performance test must be the maximum of 30 unit operating days or 720 hours. For each day in which the unit operates, you must obtain hourly mercury concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a mercury CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A of 40 CFR part 60, appendix B, and quality assurance procedure 6 of 40 CFR part 60, appendix F.

(15) If you are using a CEMS to measure HCl emissions to meet requirements of this subpart, you must install, certify, operate, and maintain the HCl CEMS as specified in paragraphs (a)(15)(i) and (ii) of this section. This option for an affected unit takes effect on the date a final performance specification for an HCl CEMS is published in the FEDERAL REGISTER or the date of approval of a site-specific monitoring plan.

(i) Operate the continuous emissions monitoring system in accordance with the applicable performance specification in 40 CFR part 60, appendix B. The duration of the performance test must be the maximum of 30 unit operating days or 720 hours. For each day in which the unit operates, you must obtain hourly HCl concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a HCl CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the HCl mass emissions rate to the atmosphere according to the requirements of the applicable performance specification of 40 CFR part 60, appendix B, and the quality assurance procedures of 40 CFR part 60, appendix F.

(16) If you demonstrate compliance with an applicable TSM emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum TSM input using Equation 9 of § 63.7530. If the results of recalculating the maximum TSM input using Equation 9 of § 63.7530 are higher than the maximum total selected input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the TSM emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(17) If you demonstrate compliance with an applicable TSM emission limit through fuel analysis for solid or liquid fuels, and you plan to burn a new type of fuel, you must recalculate the TSM emission rate using Equation 14 of § 63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(i) You must determine the TSM concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of TSM.

(iii) Recalculate the TSM emission rate from your boiler or process heater under these new conditions using Equation 14 of § 63.7530. The recalculated TSM emission rate must be less than the applicable emission limit.

(18) If you demonstrate continuous PM emissions compliance with a PM CPMS you will use a PM CPMS to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. You will conduct your performance test using the test method criteria in Table 5 of this subpart. You will use the PM CPMS to demonstrate continuous compliance with this operating limit. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(i) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis, updated at the end of each new boiler or process heater operating hour.

(ii) For any deviation of the 30-day rolling PM CPMS average value from the established operating parameter limit, you must:

(A) Within 48 hours of the deviation, visually inspect the air pollution control device (APCD);

(B) If inspection of the APCD identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and

(C) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the

CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this paragraph.

(iii) PM CPMS deviations from the operating limit leading to more than four required performance tests in a 12-month operating period constitute a separate violation of this subpart.

(19) If you choose to comply with the PM filterable emissions limit by using PM CEMS you must install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS as specified in paragraphs (a)(19)(i) through (vii) of this section. The compliance limit will be expressed as a 30-day rolling average of the numerical emissions limit value applicable for your unit in Tables 1 or 2 or 11 through 13 of this subpart.

(i) Install and certify your PM CEMS according to the procedures and requirements in Performance Specification 11— Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix B to part 60 of this chapter, using test criteria outlined in Table V of this rule. The reportable measurement output from the PM CEMS must be expressed in units of the applicable emissions limit (e.g., lb/MMBtu, lb/MWh).

(ii) Operate and maintain your PM CEMS according to the procedures and requirements in Procedure 2— Quality Assurance Requirements for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix F to part 60 of this chapter.

(A) You must conduct the relative response audit (RRA) for your PM CEMS at least once annually.

(B) You must conduct the relative correlation audit (RCA) for your PM CEMS at least once every 3 years.

(iii) Collect PM CEMS hourly average output data for all boiler operating hours except as indicated in paragraph (i) of this section.

(iv) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all nonexempt boiler or process heater operating hours.

(v) You must collect data using the PM CEMS at all times the unit is operating and at the intervals specified this paragraph (a), except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities.

(vi) You must use all the data collected during all boiler or process heater operating hours in assessing the compliance with your operating limit except:

(A) 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 in calculations and report any such periods in your annual deviation report;

(B) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, 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 in calculations used to report emissions or operating levels and report any such periods in your annual deviation report;

(C) Any data recorded during periods of startup or shutdown.

(vii) You must record and make available upon request results of PM CEMS system performance audits, dates and duration of periods when the PM CEMS is out of control to completion of the corrective actions necessary to return the PM CEMS to operation consistent with your site-specific monitoring plan.

(b) You must report each instance in which you did not meet each emission limit and operating limit in Tables 1 through 4 or 11 through 13 to this subpart that apply to you. These instances are deviations from the emission limits or operating limits, respectively, in this subpart. These deviations must be reported according to the requirements in § 63.7550.

(c) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must follow the sampling frequency specified in paragraphs (c)(1) through (4) of this section and conduct this sampling according to the procedures in § 63.7521(f) through (i).

(1) If the initial mercury constituents in the gaseous fuels are measured to be equal to or less than half of the mercury specification as defined in § 63.7575, you do not need to conduct further sampling.

(2) If the initial mercury constituents are greater than half but equal to or less than 75 percent of the mercury specification as defined in § 63.7575, you will conduct semi-annual sampling. If 6 consecutive semi-annual fuel analyses demonstrate 50 percent or less of the mercury specification, you do not need to conduct further sampling. If any semi-annual sample exceeds 75 percent of the mercury specification, you must return to monthly sampling for that fuel, until 12 months of fuel analyses again are less than 75 percent of the compliance level.

(3) If the initial mercury constituents are greater than 75 percent of the mercury specification as defined in § 63.7575, you will conduct monthly sampling. If 12 consecutive monthly fuel analyses demonstrate 75 percent or less of the mercury specification, you may decrease the fuel analysis frequency to semi-annual for that fuel.

(4) If the initial sample exceeds the mercury specification as defined in § 63.7575, each affected boiler or process heater combusting this fuel is not part of the unit designed to burn gas 1 subcategory and must be in compliance with the emission and operating limits for the appropriate subcategory. You may elect to conduct additional monthly sampling while complying with these emissions and operating limits to demonstrate that the fuel qualifies as another gas 1 fuel. If 12 consecutive monthly fuel analyses samples are at or below the mercury specification as defined in § 63.7575, each affected boiler or process heater combusting the fuel can elect to switch back into the unit designed to burn gas 1 subcategory until the mercury specification is exceeded.

(d) For startup and shutdown, you must meet the work practice standards according to item 5 of Table 3 of this subpart.

[78 FR 7179, Jan. 31, 2013]

**§ 63.7541 How do I demonstrate continuous compliance under the emissions averaging provision?**

(a) Following the compliance date, the owner or operator must demonstrate compliance with this subpart on a continuous basis by meeting the requirements of paragraphs (a)(1) through (5) of this section.

(1) For each calendar month, demonstrate compliance with the average weighted emissions limit for the existing units participating in the emissions averaging option as determined in § 63.7522(f) and (g).

(2) You must maintain the applicable opacity limit according to paragraphs (a)(2)(i) and (ii) of this section.

(i) For each existing unit participating in the emissions averaging option that is equipped with a dry control system and not vented to a common stack, maintain opacity at or below the applicable limit.

(ii) For each group of units participating in the emissions averaging option where each unit in the group is equipped with a dry control system and vented to a common stack that does not receive emissions from non-affected units, maintain opacity at or below the applicable limit at the common stack.

(3) For each existing unit participating in the emissions averaging option that is equipped with a wet scrubber, maintain the 30-day rolling average parameter values at or above the operating limits established during the most recent performance test.

(4) For each existing unit participating in the emissions averaging option that has an approved alternative operating parameter, maintain the 30-day rolling average parameter values consistent with the approved monitoring plan.

(5) For each existing unit participating in the emissions averaging option venting to a common stack configuration containing affected units from other subcategories, maintain the appropriate operating limit for each unit as specified in Table 4 to this subpart that applies.

(b) Any instance where the owner or operator fails to comply with the continuous monitoring requirements in paragraphs (a)(1) through (5) of this section is a deviation.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7182, Jan. 31, 2013]

**Notification, Reports, and Records**

**§ 63.7545 What notifications must I submit and when?**

(a) You must submit to the Administrator all of the notifications in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.

(b) As specified in § 63.9(b)(2), if you startup your affected source before January 31, 2013, you must submit an Initial Notification not later than 120 days after January 31, 2013.

(c) As specified in § 63.9(b)(4) and (5), if you startup your new or reconstructed affected source on or after January 31, 2013, you must submit an Initial Notification not later than 15 days after the actual date of startup of the affected source.

(d) 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.

(e) If you are required to conduct an initial compliance demonstration as specified in § 63.7530, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to § 63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8), as applicable. If you are not required to conduct an initial compliance demonstration as specified in § 63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8).

(1) A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with this subpart, description of the fuel(s) burned, including whether the fuel(s) were a secondary material determined by you or the EPA through a petition process to be a non-waste under § 241.3 of this chapter, whether the fuel(s) were a secondary material processed from discarded non-hazardous secondary materials within the meaning of § 241.3 of this chapter, and justification for the selection of fuel(s) burned during the compliance demonstration.

(2) Summary of the results of all performance tests and fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limits, and including:

(i) Identification of whether you are complying with the PM emission limit or the alternative TSM emission limit.

(ii) Identification of whether you are complying with the output-based emission limits or the heat input-based (i.e., lb/MMBtu or ppm) emission limits,

(3) A summary of the maximum CO emission levels recorded during the performance test to show that you have met any applicable emission standard in Tables 1, 2, or 11 through 13 to this subpart, if you are not using a CO CEMS to demonstrate compliance.

(4) Identification of whether you plan to demonstrate compliance with each applicable emission limit through performance testing, a CEMS, or fuel analysis.

(5) Identification of whether you plan to demonstrate compliance by emissions averaging and identification of whether you plan to demonstrate compliance by using efficiency credits through energy conservation:

(i) If you plan to demonstrate compliance by emission averaging, report the emission level that was being achieved or the control technology employed on January 31, 2013.

(ii) [Reserved]

(6) A signed certification that you have met all applicable emission limits and work practice standards.

(7) If you had a deviation from any emission limit, work practice standard, or operating limit, you must also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report.

(8) In addition to the information required in § 63.9(h)(2), your notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) “This facility complies with the required initial tune-up according to the procedures in § 63.7540(a)(10)(i) through (vi).”

(ii) “This facility has had an energy assessment performed according to § 63.7530(e).”

(iii) Except for units that burn only natural gas, refinery gas, or other gas 1 fuel, or units that qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act, include the following: “No secondary materials that are solid waste were combusted in any affected unit.”

(f) If you operate a unit designed to burn natural gas, refinery gas, or other gas 1 fuels that is subject to this subpart, and you intend to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of this part, part 60, 61, or 65, or other gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in § 63.7575, you must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in § 63.7575. The notification must include the information specified in paragraphs (f)(1) through (5) of this section.

(1) Company name and address.

(2) Identification of the affected unit.

(3) Reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared or the natural gas supply interruption began.

(4) Type of alternative fuel that you intend to use.

(5) Dates when the alternative fuel use is expected to begin and end.

(g) If you intend to commence or recommence combustion of solid waste, you must provide 30 days prior notice of the date upon which you will commence or recommence combustion of solid waste. The notification must identify:

(1) The name of the owner or operator of the affected source, as defined in § 63.7490, the location of the source, the boiler(s) or process heater(s) that will commence burning solid waste, and the date of the notice.

(2) The currently applicable subcategories under this subpart.

(3) The date on which you became subject to the currently applicable emission limits.

(4) The date upon which you will commence combusting solid waste.

(h) If you have switched fuels or made a physical change to the boiler and the fuel switch or physical change resulted in the applicability of a different subcategory, you must provide notice of the date upon which you switched fuels or made the physical change within 30 days of the switch/change. The notification must identify:

(1) The name of the owner or operator of the affected source, as defined in § 63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice.

(2) The currently applicable subcategory under this subpart.

(3) The date upon which the fuel switch or physical change occurred.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7183, Jan. 31, 2013]

**§ 63.7550 What reports must I submit and when?**

(a) You must submit each report in Table 9 to this subpart that applies to you.

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section. For units that are subject only to a requirement to conduct an annual, biennial, or 5-year tune-up according to § 63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in § 63.7495 and ending on July 31 or January 31, whichever date is the first date that occurs at least 180 days (or 1, 2, or 5 years, as applicable, if submitting an annual, biennial, or 5-year compliance report) after the compliance date that is specified for your source in § 63.7495.

(2) The first compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in § 63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.

(4) Each subsequent compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.

(c) A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule.

(1) If the facility is subject to a the requirements of a tune up they must submit a compliance report with the information in paragraphs (c)(5)(i) through (iv) and (xiv) of this section.

(2) If a facility is complying with the fuel analysis they must submit a compliance report with the information in paragraphs (c)(5)(i) through (iv), (vi), (x), (xi), (xiii), (xv) and paragraph (d) of this section.

(3) If a facility is complying with the applicable emissions limit with performance testing they must submit a compliance report with the information in (c)(5)(i) through (iv), (vi), (vii), (ix), (xi), (xiii), (xv) and paragraph (d) of this section.

(4) If a facility is complying with an emissions limit using a CMS the compliance report must contain the information required in paragraphs (c)(5)(i) through (vi), (xi), (xiii), (xv) through (xvii), and paragraph (e) of this section.

(5)(i) Company and Facility name and address.

(ii) Process unit information, emissions limitations, and operating parameter limitations.

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

(iv) The total operating time during the reporting period.

(v) If you use a CMS, including CEMS, COMS, or CPMS, you must include the monitoring equipment manufacturer(s) and model numbers and the date of the last CMS certification or audit.

(vi) The total fuel use by each individual boiler or process heater subject to an emission limit within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by the EPA or your basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure.

(vii) If you are conducting performance tests once every 3 years consistent with § 63.7515(b) or (c), the date of the last 2 performance tests and a statement as to whether there have been any operational changes since the last performance test that could increase emissions.

(viii) A statement indicating that you burned no new types of fuel in an individual boiler or process heater subject to an emission limit. Or, if you did burn a new type of fuel and are subject to a HCl emission limit, you must submit the calculation of chlorine input, using Equation 7 of § 63.7530, that demonstrates that your source is still within its maximum chlorine input level established during the previous performance testing (for sources that demonstrate compliance through performance testing) or you must submit the calculation of HCl emission rate using Equation 12 of § 63.7530 that demonstrates that your source is still meeting the emission limit for HCl emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a mercury emission limit, you must submit the calculation of mercury input, using Equation 8 of § 63.7530, that demonstrates that your source is still within its maximum mercury input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of mercury emission rate using Equation 13 of § 63.7530 that demonstrates that your source is still meeting the emission limit for mercury emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a TSM emission limit, you must submit the calculation of TSM input, using Equation 9 of § 63.7530, that demonstrates that your source is still within its maximum TSM input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of TSM emission rate, using Equation 14 of § 63.7530, that demonstrates that your source is still meeting the emission limit for TSM emissions (for boilers or process heaters that demonstrate compliance through fuel analysis).

(ix) If you wish to burn a new type of fuel in an individual boiler or process heater subject to an emission limit and you cannot demonstrate compliance with the maximum chlorine input operating limit using Equation 7 of § 63.7530 or the maximum mercury input operating limit using Equation 8 of § 63.7530, or the maximum TSM input operating limit using Equation 9 of § 63.7530 you must include in the compliance report a statement indicating the intent to conduct a new performance test within 60 days of starting to burn the new fuel.

(x) A summary of any monthly fuel analyses conducted to demonstrate compliance according to §§ 63.7521 and 63.7530 for individual boilers or process heaters subject to emission limits, and any fuel specification analyses conducted according to §§ 63.7521(f) and 63.7530(g).

(xi) If there are no deviations from any emission limits or operating limits in this subpart that apply to you, a statement that there were no deviations from the emission limits or operating limits during the reporting period.

(xii) If there were no deviations from the monitoring requirements including no periods during which the CMSs, including CEMS, COMS, and CPMS, were out of control as specified in § 63.8(c)(7), a statement that there were no deviations and no periods during which the CMS were out of control during the reporting period.

(xiii) If a malfunction occurred during the reporting period, the 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 you during a malfunction of a boiler, process heater, or associated air pollution control device or CMS to minimize emissions in accordance with § 63.7500(a)(3), including actions taken to correct the malfunction.

(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to § 63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.

(xv) If you plan to demonstrate compliance by emission averaging, certify the emission level achieved or the control technology employed is no less stringent than the level or control technology contained in the notification of compliance status in § 63.7545(e)(5)(i).

(xvi) For each reporting period, the compliance reports must include all of the calculated 30 day rolling average values based on the daily CEMS (CO and mercury) and CPMS (PM CPMS output, scrubber pH, scrubber liquid flow rate, scrubber pressure drop) data.

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

(d) For each deviation from an emission limit or operating limit in this subpart that occurs at an individual boiler or process heater where you are not using a CMS to comply with that emission limit or operating limit, the compliance report must additionally contain the information required in paragraphs (d)(1) through (3) of this section.

(1) A description of the deviation and which emission limit or operating limit from which you deviated.

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

(3) If the deviation occurred during an annual performance test, provide the date the annual performance test was completed.

(e) For each deviation from an emission limit, operating limit, and monitoring requirement in this subpart occurring at an individual boiler or process heater where you are using a CMS to comply with that emission limit or operating limit, the compliance report must additionally contain the information required in paragraphs (e)(1) through (9) of this section. This includes any deviations from your site-specific monitoring plan as required in § 63.7505(d).

(1) The date and time that each deviation started and stopped and description of the nature of the deviation (i.e., what you deviated from).

(2) The date and time 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.

(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 characterization 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's downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.

(8) A brief description of the source for which there was a deviation.

(9) A description of any changes in CMSs, processes, or controls since the last reporting period for the source for which there was a deviation.

(f)-(g) [Reserved]

(h) You must submit the reports according to the procedures specified in paragraphs (h)(1) through (3) of this section.

(1) Within 60 days after the date of completing each performance test (defined in § 63.2) as required by this subpart you must submit the results of the performance tests, including any associated fuel analyses, required by this subpart and the compliance reports required in § 63.7550(b) to the EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through the EPA's Central Data Exchange (CDX) ( *www.epa.gov/cdx* ). Performance test data must be submitted in the file format generated through use of the EPA's Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/index.html* ). Only data collected using test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to the EPA via CDX as described earlier in this paragraph. At the discretion of the Administrator, you must also submit these reports, including the confidential business information, to the Administrator in the format specified by the Administrator. For any performance test conducted using test methods that are not listed on the ERT Web site, the owner or operator shall submit the results of the performance test in paper submissions to the Administrator.

(2) Within 60 days after the date of completing each CEMS performance evaluation test (defined in 63.2) you must submit the relative accuracy test audit (RATA) data to the EPA's Central Data Exchange by using CEDRI as mentioned in paragraph (h)(1) of this section. Only RATA pollutants that can be documented with the ERT (as listed on the ERT Web site) are subject to this requirement. For any performance evaluations with no corresponding RATA pollutants listed on the ERT Web site, the owner or operator shall submit the results of the performance evaluation in paper submissions to the Administrator.

(3) You must submit all reports required by Table 9 of this subpart electronically using CEDRI that is accessed through the 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 report you must submit the report to the Administrator at the appropriate address listed in § 63.13. At the discretion of the Administrator, you must also submit these reports, to the Administrator in the format specified by the Administrator.

[78 FR 7183, Jan. 31, 2013]

**§ 63.7555 What records must I keep?**

(a) You must keep records according to paragraphs (a)(1) and (2) 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 or semiannual compliance report that you submitted, according to the requirements in § 63.10(b)(2)(xiv).

(2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in § 63.10(b)(2)(viii).

(b) For each CEMS, COMS, and continuous monitoring system you must keep records according to paragraphs (b)(1) through (5) of this section.

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

(2) Monitoring data for continuous opacity monitoring system during a performance evaluation as required in § 63.6(h)(7)(i) and (ii).

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

(4) Request for alternatives to relative accuracy test for CEMS as required in § 63.8(f)(6)(i).

(5) Records of the date and time that each deviation started and stopped.

(c) You must keep the records required in Table 8 to this subpart including records of all monitoring data and calculated averages for applicable operating limits, such as opacity, pressure drop, pH, and operating load, to show continuous compliance with each emission limit and operating limit that applies to you.

(d) For each boiler or process heater subject to an emission limit in Tables 1, 2, or 11 through 13 to this subpart, you must also keep the applicable records in paragraphs (d)(1) through (11) of this section.

(1) You must keep records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used.

(2) If you combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to § 241.3(b)(1) and (2) of this chapter, you must keep a record that documents how the secondary material meets each of the legitimacy criteria under § 241.3(d)(1) of this chapter. If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to § 241.3(b)(4) of this chapter, you must keep records as to how the operations that produced the fuel satisfy the definition of processing in § 241.2 of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under § 241.3(c) of this chapter, you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per § 241.4 of this chapter, you must keep records documenting that the material is listed as a non-waste under § 241.4(a) of this chapter. Units exempt from the incinerator standards under section 129(g)(1) of the Clean Air Act because they are qualifying facilities burning a homogeneous waste stream do not need to maintain the records described in this paragraph (d)(2).

(3) For units in the limited use subcategory, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.

(4) A copy of all calculations and supporting documentation of maximum chlorine fuel input, using Equation 7 of § 63.7530, that were done to demonstrate continuous compliance with the HCl emission limit, for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of HCl emission rates, using Equation 12 of § 63.7530, that were done to demonstrate compliance with the HCl emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum chlorine fuel input or HCl emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate chlorine fuel input, or HCl emission rate, for each boiler and process heater.

(5) A copy of all calculations and supporting documentation of maximum mercury fuel input, using Equation 8 of § 63.7530, that were done to demonstrate continuous compliance with the mercury emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of mercury emission rates, using Equation 13 of § 63.7530, that were done to demonstrate compliance with the mercury emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum mercury fuel input or mercury emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate mercury fuel input, or mercury emission rates, for each boiler and process heater.

(6) If, consistent with § 63.7515(b), you choose to stack test less frequently than annually, you must keep a record that documents that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit (or, in specific instances noted in Tables 1 and 2 or 11 through 13 to this subpart, less than the applicable

emission limit), and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.

(7) Records of the occurrence and duration of each malfunction of the boiler or process heater, or of the associated air pollution control and monitoring equipment.

(8) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in § 63.7500(a)(3), including corrective actions to restore the malfunctioning boiler or process heater, air pollution control, or monitoring equipment to its normal or usual manner of operation.

(9) A copy of all calculations and supporting documentation of maximum TSM fuel input, using Equation 9 of § 63.7530, that were done to demonstrate continuous compliance with the TSM emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of TSM emission rates, using Equation 14 of § 63.7530, that were done to demonstrate compliance with the TSM emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum TSM fuel input or TSM emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate TSM fuel input, or TSM emission rates, for each boiler and process heater.

(10) You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.

(11) You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.

(e) If you elect to average emissions consistent with § 63.7522, you must additionally keep a copy of the emission averaging implementation plan required in § 63.7522(g), all calculations required under § 63.7522, including monthly records of heat input or steam generation, as applicable, and monitoring records consistent with § 63.7541.

(f) If you elect to use efficiency credits from energy conservation measures to demonstrate compliance according to § 63.7533, you must keep a copy of the Implementation Plan required in § 63.7533(d) and copies of all data and calculations used to establish credits according to § 63.7533(b), (c), and (f).

(g) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must maintain monthly records (or at the frequency required by § 63.7540(c)) of the calculations and results of the fuel specification for mercury in Table 6.

(h) If you operate a unit in the unit designed to burn gas 1 subcategory that is subject to this subpart, and you use an alternative fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart under this part, other gas 1 fuel, or gaseous fuel subject to another subpart of this part or part 60, 61, or 65, you must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies.

(i) You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.

(j) You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7185, Jan. 31, 2013]

**§ 63.7560 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 on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1). You can keep the records off site for the remaining 3 years.

**Other Requirements and Information**

**§ 63.7565 What parts of the General Provisions apply to me?**

Table 10 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

**§ 63.7570 Who implements and enforces this subpart?**

(a) This subpart can be implemented and enforced by the EPA, or an Administrator such as your state, local, or tribal agency. If the EPA Administrator has delegated authority to your state, local, or tribal agency, then that agency (as well as the EPA) 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 under 40 CFR part 63, subpart E, the authorities listed in paragraphs (b)(1) through (5) of this section are retained by the EPA Administrator and are not transferred to the state, local, or tribal agency, however, the EPA retains oversight of this subpart and can take enforcement actions, as appropriate.

(1) Approval of alternatives to the non-opacity emission limits and work practice standards in § 63.7500(a) and (b) under § 63.6(g).

(2) Approval of alternative opacity emission limits in § 63.7500(a) under § 63.6(h)(9).

(3) Approval of major change to test methods in Table 5 to this subpart under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90, and alternative analytical methods requested under § 63.7521(b)(2).

(4) Approval of major change to monitoring under § 63.8(f) and as defined in § 63.90, and approval of alternative operating parameters under § 63.7500(a)(2) and § 63.7522(g)(2).

(5) Approval of major change to recordkeeping and reporting under § 63.10(e) and as defined in § 63.90.

[76 FR 15664, Mar. 21, 2011 as amended at 78 FR 7186, Jan. 31, 2013]

**§ 63.7575 What definitions apply to this subpart?**

Terms used in this subpart are defined in the Clean Air Act, in § 63.2 (the General Provisions), and in this section as follows:

*10-day rolling average* means the arithmetic mean of the previous 240 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating. The 240 hours should be consecutive, but not necessarily continuous if operations were intermittent.

*30-day rolling average* means the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating. The 720 hours should be consecutive, but not necessarily continuous if operations were intermittent.

*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.

*Annual capacity factor* means the ratio between the actual heat input to a boiler or process heater from the fuels burned during a calendar year and the potential heat input to the boiler or process heater had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity.

*Annual heat input* means the heat input for the 12 months preceding the compliance demonstration.

*Average annual heat input rate* means total heat input divided by the hours of operation for the 12 months preceding the compliance demonstration.

*Bag leak detection system* means a group of instruments that are 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 electrodynamic, triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

*Benchmark* means the fuel heat input for a boiler or process heater for the one-year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

*Biodiesel* means a mono-alkyl ester derived from biomass and conforming to ASTM D6751-11b, Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels (incorporated by reference, see § 63.14).

*Biomass or bio-based solid fuel* means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue; wood products ( *e.g.,* trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings); animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff ( *e.g.,* almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds. This definition of biomass is not intended to suggest that these materials are or are not solid waste.

*Blast furnace gas fuel-fired boiler or process heater* means an industrial/commercial/institutional boiler or process heater that receives 90 percent or more of its total annual gas volume from blast furnace gas.

*Boiler* means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water. Controlled flame combustion refers to a steady-state, or near steady-state, process wherein fuel and/or oxidizer feed rates are controlled. A device combusting solid waste, as defined in § 241.3 of this chapter, is not a boiler unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Waste heat boilers are excluded from this definition.

*Boiler system* means the boiler and associated components, such as, the feed water system, the combustion air system, the fuel system (including burners), blowdown system, combustion control systems, steam systems, and condensate return systems.

*Calendar year* means the period between January 1 and December 31, inclusive, for a given year.

*Coal* means all solid fuels classifiable as anthracite, bituminous, sub-bituminous, or lignite by ASTM D388 (incorporated by reference, see § 63.14), coal refuse, and petroleum coke. For the purposes of this subpart, this definition of “coal” includes synthetic fuels derived from coal, including but not limited to, solvent-refined coal, coal-oil mixtures, and coal-water mixtures. Coal derived gases are excluded from this definition.

*Coal refuse* means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (6,000 Btu per pound) on a dry basis.

*Commercial/institutional boiler* means a boiler used in commercial establishments or institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, elementary and secondary schools, libraries, religious establishments, governmental buildings, hotels, restaurants, and laundries to provide electricity, steam, and/or hot water.

*Common stack* means the exhaust of emissions from two or more affected units through a single flue. Affected units with a common stack may each have separate air pollution control systems located before the common stack, or may have a single air pollution control system located after the exhausts come together in a single flue.

*Cost-effective energy conservation measure* means a measure that is implemented to improve the energy efficiency of the boiler or facility that has a payback (return of investment) period of 2 years or less.

*Daily block average* means the arithmetic mean of all valid emission concentrations or parameter levels recorded when a unit is operating measured over the 24-hour period from 12 a.m. (midnight) to 12 a.m. (midnight), except for periods of startup and shutdown or downtime.

*Deviation.* (1) *Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(i) Fails to meet any applicable requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard; or

(ii) 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.

(2) A deviation is not always a violation.

*Dioxins/furans* means tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

*Distillate oil* means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see § 63.14) or diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see § 63.14), kerosene, and biodiesel as defined by the American Society of Testing and Materials in ASTM D6751-11b (incorporated by reference, see § 60.14).

*Dry scrubber* means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems used as control devices in fluidized bed boilers and process heaters are included in this definition. A dry scrubber is a dry control system.

*Dutch oven* means a unit having a refractory-walled cell connected to a conventional boiler setting. Fuel materials are introduced through an opening in the roof of the dutch oven and burn in a pile on its floor. Fluidized bed boilers are not part of the dutch oven design category.

*Efficiency credit* means emission reductions above those required by this subpart. Efficiency credits generated may be used to comply with the emissions limits. Credits may come from pollution prevention projects that result in reduced fuel use by affected units. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to implementation of the energy conservation measures identified in the energy assessment.

*Electric utility steam generating unit (EGU)* means a fossil fuel-fired combustion unit of more than 25 megawatts electric (MWe) that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 MWe output to any utility power distribution system for sale is considered an electric utility steam generating unit. To be “capable of combusting” fossil fuels, an EGU would need to have these fuels allowed in their operating permits and have the appropriate fuel handling facilities on-site or otherwise available (e.g., coal handling equipment, including coal storage area, belts and conveyers, pulverizers, etc.; oil storage facilities). In addition, fossil fuel-fired EGU means any EGU

that fired fossil fuel for more than 10.0 percent of the average annual heat input in any 3 consecutive calendar years or for more than 15.0 percent of the annual heat input during any one calendar year after April 16, 2012.

*Electrostatic precipitator (ESP)* means an add-on air pollution control device used to capture particulate matter by charging the particles using an electrostatic field, collecting the particles using a grounded collecting surface, and transporting the particles into a hopper. An electrostatic precipitator is usually a dry control system.

*Energy assessment* means the following for the emission units covered by this subpart:

(1) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of less than 0.3 trillion Btu (TBtu) per year will be 8 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s) and any on-site energy use system(s) accounting for at least 50 percent of the affected boiler(s) energy (e.g., steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing an 8-hour on-site energy assessment.

(2) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of 0.3 to 1.0 TBtu/year will be 24 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s) and any on-site energy use system(s) accounting for at least 33 percent of the energy (e.g., steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing a 24-hour on-site energy assessment.

(3) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity greater than 1.0 TBtu/year will be up to 24 on-site technical labor hours in length for the first TBtu/yr plus 8 on-site technical labor hours for every additional 1.0 TBtu/yr not to exceed 160 on-site technical hours, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 20 percent of the energy (e.g., steam, process heat, hot water, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities.

(4) The on-site energy use systems serving as the basis for the percent of affected boiler(s) and process heater(s) energy production in paragraphs (1), (2), and (3) of this definition may be segmented by production area or energy use area as most logical and applicable to the specific facility being assessed (e.g., product X manufacturing area; product Y drying area; Building Z).

*Energy management practices* means the set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility.

*Energy management program* means a program that includes a set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility. Facilities may establish their program through energy management systems compatible with ISO 50001.

*Energy use system* includes the following systems located on-site that use energy (steam, hot water, or electricity) provided by the affected boiler or process heater: process heating; compressed air systems; machine drive (motors, pumps, fans); process cooling; facility heating, ventilation, and air-conditioning systems; hot water systems; building envelop; and lighting; or other systems that use steam, hot water, process heat, or electricity provided by the affected boiler or process heater. Energy use systems are only those systems using energy clearly produced by affected boilers and process heaters.

*Equivalent* means the following only as this term is used in Table 6 to this subpart:

(1) An equivalent sample collection procedure means a published voluntary consensus standard or practice (VCS) or EPA method that includes collection of a minimum of three composite fuel samples, with each composite consisting of a minimum of three increments collected at approximately equal intervals over the test period.

(2) An equivalent sample compositing procedure means a published VCS or EPA method to systematically mix and obtain a representative subsample (part) of the composite sample.

(3) An equivalent sample preparation procedure means a published VCS or EPA method that: Clearly states that the standard, practice or method is appropriate for the pollutant and the fuel matrix; or is cited as an appropriate sample preparation standard, practice or method for the pollutant in the chosen VCS or EPA determinative or analytical method.

(4) An equivalent procedure for determining heat content means a published VCS or EPA method to obtain gross calorific (or higher heating) value.

(5) An equivalent procedure for determining fuel moisture content means a published VCS or EPA method to obtain moisture content. If the sample analysis plan calls for determining metals (especially the mercury, selenium, or arsenic) using an aliquot of the dried sample, then the drying temperature must be modified to prevent vaporizing these metals. On the other hand, if metals analysis is done on an “as received” basis, a separate aliquot can be dried to determine moisture content and the metals concentration mathematically adjusted to a dry basis.

(6) An equivalent pollutant (mercury, HCl) determinative or analytical procedure means a published VCS or EPA method that clearly states that the standard, practice, or method is appropriate for the pollutant and the fuel matrix and has a published detection limit equal or lower than the methods listed in Table 6 to this subpart for the same purpose.

*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. A fabric filter is a dry control system.

*Federally enforceable* means all limitations and conditions that are enforceable by the EPA Administrator, including, but not limited to, the requirements of 40 CFR parts 60, 61, 63, and 65, requirements within any applicable state implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

*Fluidized bed boiler* means a boiler utilizing a fluidized bed combustion process that is not a pulverized coal boiler.

*Fluidized bed boiler with an integrated fluidized bed heat exchanger* means a boiler utilizing a fluidized bed combustion where the entire tube surface area is located outside of the furnace section at the exit of the cyclone section and exposed to the flue gas stream for conductive heat transfer. This design applies only to boilers in the unit designed to burn coal/solid fossil fuel subcategory that fire coal refuse.

*Fluidized bed combustion* means a process where a fuel is burned in a bed of granulated particles, which are maintained in a mobile suspension by the forward flow of air and combustion products.

*Fuel cell* means a boiler type in which the fuel is dropped onto suspended fixed grates and is fired in a pile. The refractory-lined fuel cell uses combustion air preheating and positioning of secondary and tertiary air injection ports to improve boiler efficiency. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, and suspension burners are not part of the fuel cell subcategory.

*Fuel type* means each category of fuels that share a common name or classification. Examples include, but are not limited to, bituminous coal, sub-bituminous coal, lignite, anthracite, biomass, distillate oil, residual oil. Individual fuel types received from different suppliers are not considered new fuel types.

*Gaseous fuel* includes, but is not limited to, natural gas, process gas, landfill gas, coal derived gas, refinery gas, and biogas. Blast furnace gas and process gases that are regulated under another subpart of this part, or part 60, part 61, or part 65 of this chapter, are exempted from this definition.

*Heat input* means heat derived from combustion of fuel in a boiler or process heater and does not include the heat input from preheated combustion air, recirculated flue gases, returned condensate, or exhaust gases from other sources such as gas turbines, internal combustion engines, kilns, etc.

*Heavy liquid* includes residual oil and any other liquid fuel not classified as a light liquid.

*Hourly average* means the arithmetic average of at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

*Hot water heater* means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous, liquid, or biomass/bio-based solid fuel and is withdrawn for use external to the vessel. Hot water boilers (i.e., not generating steam) combusting gaseous, liquid, or biomass fuel with a heat input capacity of less than 1.6 million Btu per hour are included in this definition. The 120 U.S. gallon capacity threshold to be considered a hot water heater is independent of the 1.6 MMBtu/hr heat input capacity threshold for hot water boilers. Hot water heater also means a tankless unit that provides on demand hot water.

*Hybrid suspension grate boiler* means a boiler designed with air distributors to spread the fuel material over the entire width and depth of the boiler combustion zone. The biomass fuel combusted in these units exceeds a moisture content of 40 percent on an as-fired annual heat input basis. The drying and much of the combustion of the fuel takes place in suspension, and the combustion is completed on the grate or floor of the boiler. Fluidized bed, dutch oven, and pile burner designs are not part of the hybrid suspension grate boiler design category.

*Industrial boiler* means a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity.

*Light liquid* includes distillate oil, biodiesel, or vegetable oil.

*Limited-use boiler or process heater* means any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable average annual capacity factor of no more than 10 percent.

*Liquid fuel* includes, but is not limited to, light liquid, heavy liquid, any form of liquid fuel derived from petroleum, used oil, liquid biofuels, biodiesel, vegetable oil, and comparable fuels as defined under 40 CFR 261.38.

*Load fraction* means the actual heat input of a boiler or process heater divided by heat input during the performance test that established the minimum sorbent injection rate or minimum activated carbon injection rate, expressed as a fraction (e.g., for 50 percent load the load fraction is 0.5).

*Major source for oil and natural gas production facilities,* 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) Emissions from processes, operations, or equipment that are not part of the same facility, as defined in this section, shall not be aggregated; and

(3) For facilities that are production field facilities, only HAP emissions from glycol dehydration units and storage vessels with the potential for flash emissions shall be aggregated for a major source determination. For facilities that are not production field facilities, HAP emissions from all HAP emission units shall be aggregated for a major source determination.

*Metal process furnaces* are a subcategory of process heaters, as defined in this subpart, which include natural gas-fired annealing furnaces, preheat furnaces, reheat furnaces, aging furnaces, heat treat furnaces, and homogenizing furnaces.

*Million Btu (MMBtu)* means one million British thermal units.

*Minimum activated carbon injection rate* means load fraction multiplied by the lowest hourly average activated carbon injection rate measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

*Minimum oxygen level* means the lowest hourly average oxygen level measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

*Minimum pressure drop* means the lowest hourly average pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

*Minimum scrubber effluent pH* means the lowest hourly average sorbent liquid pH measured at the inlet to the wet scrubber according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable hydrogen chloride emission limit.

*Minimum scrubber liquid flow rate* means the lowest hourly average liquid flow rate (e.g., to the PM scrubber or to the acid gas scrubber) measured according to Table 7 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limit.

*Minimum scrubber pressure drop* means the lowest hourly average scrubber pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

*Minimum sorbent injection rate* means:

(1) The load fraction multiplied by the lowest hourly average sorbent injection rate for each sorbent measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits; or

(2) For fluidized bed combustion, the lowest average ratio of sorbent to sulfur measured during the most recent performance test.

*Minimum total secondary electric power* means the lowest hourly average total secondary electric power determined from the values of secondary voltage and secondary current to the electrostatic precipitator measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits.

*Natural gas* means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum gas, as defined in ASTM D1835 (incorporated by reference, see § 63.14); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 35 and 41 megajoules (MJ) per dry standard cubic meter (950 and 1,100 Btu per dry standard cubic foot); or

(4) Propane or propane derived synthetic natural gas. Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure $C_3H_8$ .

*Opacity* means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

*Operating day* means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the boiler or process heater unit. It is not necessary for fuel to be combusted for the entire 24-hour period.

*Other combustor* means a unit designed to burn solid fuel that is not classified as a dutch oven, fluidized bed, fuel cell, hybrid suspension grate boiler, pulverized coal boiler, stoker, sloped grate, or suspension boiler as defined in this subpart.

*Other gas 1 fuel* means a gaseous fuel that is not natural gas or refinery gas and does not exceed a maximum concentration of 40 micrograms/cubic meters of mercury.

*Oxygen analyzer system* means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler or process heater flue gas, boiler or process heater, firebox, or other appropriate location. This definition includes oxygen trim systems. The source owner or operator must install, calibrate, maintain, and operate the oxygen analyzer system in accordance with the manufacturer's recommendations.

*Oxygen trim system* means a system of monitors that is used to maintain excess air at the desired level in a combustion device. A typical system consists of a flue gas oxygen and/or CO monitor that automatically provides a feedback signal to the combustion air controller.

*Particulate matter (PM)* means any finely divided solid or liquid material, other than uncombined water, as measured by the test methods specified under this subpart, or an approved alternative method.

*Period of gas curtailment or supply interruption* means a period of time during which the supply of gaseous fuel to an affected boiler or process heater is restricted or halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.

*Pile burner* means a boiler design incorporating a design where the anticipated biomass fuel has a high relative moisture content. Grates serve to support the fuel, and underfire air flowing up through the grates provides oxygen for combustion, cools the grates, promotes turbulence in the fuel bed, and fires the fuel. The most common form of pile burning is the dutch oven.

*Process heater* means an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials. A device combusting solid waste, as defined in § 241.3 of this chapter, is not a process heater unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Process heaters do not include units used for comfort heat or space heat, food preparation for on-site consumption, or autoclaves. Waste heat process heaters are excluded from this definition.

*Pulverized coal boiler* means a boiler in which pulverized coal or other solid fossil fuel is introduced into an air stream that carries the coal to the combustion chamber of the boiler where it is fired in suspension.

*Qualified energy assessor* means:

(1) Someone who has demonstrated capabilities to evaluate energy savings opportunities for steam generation and major energy using systems, including, but not limited to:

(i) Boiler combustion management.

(ii) Boiler thermal energy recovery, including

(A) Conventional feed water economizer,

(B) Conventional combustion air preheater, and

(C) Condensing economizer.

(iii) Boiler blowdown thermal energy recovery.

(iv) Primary energy resource selection, including

(A) Fuel (primary energy source) switching, and

(B) Applied steam energy versus direct-fired energy versus electricity.

(v) Insulation issues.

(vi) Steam trap and steam leak management.

(vi) Condensate recovery.

(viii) Steam end-use management.

(2) Capabilities and knowledge includes, but is not limited to:

(i) Background, experience, and recognized abilities to perform the assessment activities, data analysis, and report preparation.

(ii) Familiarity with operating and maintenance practices for steam or process heating systems.

(iii) Additional potential steam system improvement opportunities including improving steam turbine operations and reducing steam demand.

(iv) Additional process heating system opportunities including effective utilization of waste heat and use of proper process heating methods.

(v) Boiler-steam turbine cogeneration systems.

(vi) Industry specific steam end-use systems.

*Refinery gas* means any gas that is generated at a petroleum refinery and is combusted. Refinery gas includes natural gas when the natural gas is combined and combusted in any proportion with a gas generated at a refinery. Refinery gas includes gases generated from other facilities when that gas is combined and combusted in any proportion with gas generated at a refinery.

*Regulated gas stream* means an offgas stream that is routed to a boiler or process heater for the purpose of achieving compliance with a standard under another subpart of this part or part 60, part 61, or part 65 of this chapter.

*Residential boiler* means a boiler used to provide heat and/or hot water and/or as part of a residential combined heat and power system. This definition includes boilers located at an institutional facility (e.g., university campus, military base, church grounds) or commercial/industrial facility (e.g., farm) used primarily to provide heat and/or hot water for:

(1) A dwelling containing four or fewer families; or

(2) A single unit residence dwelling that has since been converted or subdivided into condominiums or apartments.

*Residual oil* means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society of Testing and Materials in ASTM D396-10 (incorporated by reference, *see* § 63.14(b)).

*Responsible official* means responsible official as defined in § 70.2.

*Secondary material* means the material as defined in § 241.2 of this chapter.

*Shutdown* means the cessation of operation of a boiler or process heater for any purpose. Shutdown begins either when none of the steam from the boiler is supplied for heating and/or producing electricity, or for any other purpose, or at the point of no fuel being fired in the boiler or process heater, whichever is earlier. Shutdown ends when there is no steam and no heat being supplied and no fuel being fired in the boiler or process heater.

*Sloped grate* means a unit where the solid fuel is fed to the top of the grate from where it slides downwards; while sliding the fuel first dries and then ignites and burns. The ash is deposited at the bottom of the grate. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a sloped grate design.

*Solid fossil fuel* includes, but is not limited to, coal, coke, petroleum coke, and tire derived fuel.

*Solid fuel* means any solid fossil fuel or biomass or bio-based solid fuel.

*Startup* means either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying steam or heat for heating and/or producing electricity, or for any other purpose, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam or heat from the boiler or process heater is supplied for heating, and/or producing electricity, or for any other purpose.

*Steam output* means:

(1) For a boiler that produces steam for process or heating only (no power generation), the energy content in terms of MMBtu of the boiler steam output,

(2) For a boiler that cogenerates process steam and electricity (also known as combined heat and power), the total energy output, which is the sum of the energy content of the steam exiting the turbine and sent to process in MMBtu and the energy of the electricity generated converted to MMBtu at a rate of 10,000 Btu per kilowatt-hour generated (10 MMBtu per megawatt-hour), and

(3) For a boiler that generates only electricity, the alternate output-based emission limits would be calculated using Equations 21 through 25 of this section, as appropriate:

(i) For emission limits for boilers in the unit designed to burn solid fuel subcategory use Equation 21 of this section:

$$EL_{OBE} = EL_T \times 12.7 \text{ MMBtu/Mwh} \quad \text{(Eq. 21)}$$

Where:

$EL_{OBE}$ = Emission limit in units of pounds per megawatt-hour.

$EL_T$ = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

(ii) For PM and CO emission limits for boilers in one of the subcategories of units designed to burn coal use Equation 22 of this section:

$$EL_{OBE} = EL_T \times 12.2 \text{ MMBtu/Mwh} \quad \text{(Eq. 22)}$$

Where:

$EL_{OBE}$ = Emission limit in units of pounds per megawatt-hour.

$EL_T$ = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

(iii) For PM and CO emission limits for boilers in one of the subcategories of units designed to burn biomass use Equation 23 of this section:

$$EL_{OBE} = EL_T \times 13.9 \text{ MMBtu/Mwh} \quad \text{(Eq. 23)}$$

Where:

$EL_{OBE}$ = Emission limit in units of pounds per megawatt-hour.

$EL_T$ = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

(iv) For emission limits for boilers in one of the subcategories of units designed to burn liquid fuels use Equation 24 of this section:

$$EL_{OBE} = EL_T \times 13.8 \text{ MMBtu/Mwh} \quad \text{(Eq. 24)}$$

Where:

$EL_{OBE}$ = Emission limit in units of pounds per megawatt-hour.

$EL_T$ = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

(v) For emission limits for boilers in the unit designed to burn gas 2 (other) subcategory, use Equation 25 of this section:

$$EL_{OBE} = EL_T \times 10.4 \text{ MMBtu/Mwh} \quad \text{(Eq. 25)}$$

Where:

$EL_{OBE}$ = Emission limit in units of pounds per megawatt-hour.

$EL_T$ = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

*Stoker* means a unit consisting of a mechanically operated fuel feeding mechanism, a stationary or moving grate to support the burning of fuel and admit under-grate air to the fuel, an overfire air system to complete combustion, and an ash discharge system. This definition of stoker includes air swept stokers. There are two general types of stokers: Underfeed and overfeed. Overfeed stokers include mass feed and spreader stokers. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a stoker design.

*Stoker/sloped grate/other unit designed to burn kiln dried biomass* means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and is not in the stoker/sloped grate/other units designed to burn wet biomass subcategory.

*Stoker/sloped grate/other unit designed to burn wet biomass* means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and any of the biomass/bio-based solid fuel combusted in the unit exceeds 20 percent moisture on an annual heat input basis.

*Suspension burner* means a unit designed to fire dry biomass/biobased solid particles in suspension that are conveyed in an airstream to the furnace like pulverized coal. The combustion of the fuel material is completed on a grate or floor below. The biomass/biobased fuel combusted in the unit shall not exceed 20 percent moisture on an annual heat input basis. Fluidized bed, dutch oven, pile burner, and hybrid suspension grate units are not part of the suspension burner subcategory.

*Temporary boiler* means any gaseous or liquid fuel boiler that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A boiler is not a temporary boiler if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The boiler or a replacement remains at a location within the facility and performs the same or similar function for more than 12 consecutive months, unless the regulatory agency approves an extension. An extension may be granted by the regulating agency upon petition by the owner or operator of a unit specifying the basis for such a request. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another within the facility but continues to perform the same or similar function and serve the same electricity, steam, and/or hot water system in an attempt to circumvent the residence time requirements of this definition.

*Total selected metals (TSM)* means the sum of the following metallic hazardous air pollutants: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium.

*Traditional fuel* means the fuel as defined in § 241.2 of this chapter.

*Tune-up* means adjustments made to a boiler or process heater in accordance with the procedures outlined in § 63.7540(a)(10).

*Ultra low sulfur liquid fuel* means a distillate oil that has less than or equal to 15 ppm sulfur.

*Unit designed to burn biomass/bio-based solid subcategory* includes any boiler or process heater that burns at least 10 percent biomass or bio-based solids on an annual heat input basis in combination with solid fossil fuels, liquid fuels, or gaseous fuels.

*Unit designed to burn coal/solid fossil fuel subcategory* includes any boiler or process heater that burns any coal or other solid fossil fuel alone or at least 10 percent coal or other solid fossil fuel on an annual heat input basis in combination with liquid fuels, gaseous fuels, or less than 10 percent biomass and bio-based solids on an annual heat input basis.

*Unit designed to burn gas 1 subcategory* includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.

*Unit designed to burn gas 2 (other) subcategory* includes any boiler or process heater that is not in the unit designed to burn gas 1 subcategory and burns any gaseous fuels either alone or in combination with less than 10 percent coal/solid fossil fuel, and less than 10 percent biomass/bio-based solid fuel on an annual heat input basis, and no liquid fuels. Gaseous fuel boilers and process heaters that are not in the unit designed to burn gas 1 subcategory and that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that are not in the unit designed to burn gas 1 subcategory and that burn liquid fuel during periods of gas curtailment or gas supply interruption of any duration are also included in this definition.

*Unit designed to burn heavy liquid subcategory* means a unit in the unit designed to burn liquid subcategory where at least 10 percent of the heat input from liquid fuels on an annual heat input basis comes from heavy liquids.

*Unit designed to burn light liquid subcategory* means a unit in the unit designed to burn liquid subcategory that is not part of the unit designed to burn heavy liquid subcategory.

*Unit designed to burn liquid subcategory* includes any boiler or process heater that burns any liquid fuel, but less than 10 percent coal/solid fossil fuel and less than 10 percent biomass/bio-based solid fuel on an annual heat input basis, either alone or in combination with gaseous fuels. Units in the unit design to burn gas 1 or unit designed to burn gas 2 (other) subcategories that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year are not included in this definition. Units in the unit design to burn gas 1 or unit designed to burn gas 2 (other) subcategories during periods of gas curtailment or gas supply interruption of any duration are also not included in this definition.

*Unit designed to burn liquid fuel that is a non-continental unit* means an industrial, commercial, or institutional boiler or process heater meeting the definition of the unit designed to burn liquid subcategory located in the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

*Unit designed to burn solid fuel subcategory* means any boiler or process heater that burns only solid fuels or at least 10 percent solid fuel on an annual heat input basis in combination with liquid fuels or gaseous fuels.

*Vegetable oil* means oils extracted from vegetation.

*Voluntary Consensus Standards or VCS* mean technical standards ( *e.g.,* materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus bodies. EPA/Office of Air Quality Planning and Standards, by precedent, has only used VCS that are written in English. Examples of VCS bodies are: American Society of Testing and Materials (ASTM 100 Barr Harbor Drive, P.O. Box CB700, West Conshohocken, Pennsylvania 19428-B2959, (800) 262-1373, *http://www.astm.org* ), American Society of Mechanical Engineers (ASME ASME, Three Park Avenue, New York, NY 10016-5990, (800) 843-2763, *http://www.asme.org* ), International Standards Organization (ISO 1, ch. de la Voie-Creuse, Case postale 56, CH-1211 Geneva 20, Switzerland, +41 22 749 01 11, *http://www.iso.org/iso/home.htm* ), Standards Australia (AS Level 10, The Exchange Centre, 20 Bridge Street, Sydney, GPO Box 476, Sydney NSW 2001, + 61 2 9237 6171 *http://www.stadards.org.au* ), British Standards Institution (BSI, 389 Chiswick High Road, London, W4 4AL, United Kingdom, +44 (0)20 8996 9001, *http://www.bsigroup.com* ), Canadian Standards Association (CSA 5060 Spectrum Way, Suite 100, Mississauga, Ontario L4W 5N6, Canada, 800-463-6727, *http://www.csa.ca* ), European Committee for Standardization (CEN CENELEC Management Centre Avenue Marnix 17 B-1000 Brussels, Belgium +32 2 550 08 11, *http://www.cen.eu/cen* ), and German Engineering Standards (VDI VDI Guidelines Department, P.O. Box 10 11 39 40002, Duesseldorf, Germany, +49 211 6214-230, *http://www.vdi.eu* ). The types of standards that are not considered VCS are standards developed by: The United States, *e.g.,* California (CARB) and Texas (TCEQ); industry groups, such as American Petroleum Institute (API), Gas Processors Association (GPA), and Gas Research Institute (GRI); and other branches of the U.S. government, *e.g.,* Department of Defense (DOD) and Department of Transportation (DOT). This does not preclude EPA from using standards developed by groups that are not VCS bodies within their rule. When this occurs, EPA has done searches and reviews for VCS equivalent to these non-EPA methods.

*Waste heat boiler* means a device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat boilers are also referred to as heat recovery steam generators. Waste heat boilers are heat exchangers generating steam from incoming hot exhaust gas from an industrial (e.g., thermal oxidizer, kiln, furnace) or power (e.g., combustion turbine, engine) equipment. Duct burners are sometimes used to increase the temperature of the incoming hot exhaust gas.

*Waste heat process heater* means an enclosed device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat process heaters are also referred to as recuperative process heaters. This definition includes both fired and unfired waste heat process heaters.

*Wet scrubber* means any add-on air pollution control device that mixes an aqueous stream or slurry with the exhaust gases from a boiler or process heater to control emissions of particulate matter or to absorb and neutralize acid gases, such as hydrogen chloride. A wet scrubber creates an aqueous stream or slurry as a byproduct of the emissions control process.

*Work practice standard* means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act.

[78 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013]

**Table 1 to Subpart DDDDD of Part 63—Emission Limits for New or Reconstructed Boilers and Process Heaters**

As stated in § 63.7500, you must comply with the following applicable emission limits:

[Units with heat input capacity of 10 million Btu per hour or greater]

| If your boiler or process heater is in this subcategory . . . | For the following pollutants . . . | The emissions must not exceed the following emission limits, except during startup and shutdown . . . | Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . . | Using this specified sampling volume or test run duration . . . |
|---|---|---|---|---|
| 1. Units in all subcategories designed to burn solid fuel. | a. HCl | 2.2E-02 lb per MMBtu of heat input | 2.5E-02 lb per MMBtu of steam output or 0.28 lb per MWh | For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run. |
| | b. Mercury | 8.0E-07 [a]lb per MMBtu of heat input | 8.7E-07 [a]lb per MMBtu of steam output or 1.1E-05 [a]lb per MWh | For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 4 dscm. |
| 2. Units designed to burn coal/solid fossil fuel | a. Filterable PM (or TSM) | 1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input) | 1.1E-03 lb per MMBtu of steam output or 1.4E-02 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 2.9E-04 lb per MWh) | Collect a minimum of 3 dscm per run. |
| 3. Pulverized coal boilers designed to burn coal/solid fossil fuel | a. Carbon monoxide (CO) (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| 4. Stokers designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| 5. Fluidized bed units designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |

| If your boiler or process heater is in this subcategory . . . | For the following pollutants . . . | The emissions must not exceed the following emission limits, except during startup and shutdown . . . | Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . . | Using this specified sampling volume or test run duration . . . |
|---|---|---|---|---|
| 6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 1.2E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| 7. Stokers/sloped grate/others designed to burn wet biomass fuel | a. CO (or CEMS) | 620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 5.8E-01 lb per MMBtu of steam output or 6.8 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input) | 3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 3.7E-04 lb per MWh) | Collect a minimum of 2 dscm per run. |
| 8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel | a. CO | 460 ppm by volume on a dry basis corrected to 3 percent oxygen | 4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.0E-02 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input) | 3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (4.2E-03 lb per MMBtu of steam output or 5.6E-02 lb per MWh) | Collect a minimum of 2 dscm per run. |
| 9. Fluidized bed units designed to burn biomass/bio-based solids | a. CO (or CEMS) | 230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 2.2E-01 lb per MMBtu of steam output or 2.6 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 9.8E-03 lb per MMBtu of heat input; or (8.3E-05 [a]lb per MMBtu of heat input) | 1.2E-02 lb per MMBtu of steam output or 0.14 lb per MWh; or (1.1E-04 [a]lb per MMBtu of steam output or 1.2E-03 [a]lb per MWh) | Collect a minimum of 3 dscm per run. |

| If your boiler or process heater is in this subcategory . . . | For the following pollutants . . . | The emissions must not exceed the following emission limits, except during startup and shutdown . . . | Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . . | Using this specified sampling volume or test run duration . . . |
|---|---|---|---|---|
| 10. Suspension burners designed to burn biomass/bio-based solids | a. CO (or CEMS) | 2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average) | 1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.0E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input) | 3.1E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (6.6E-03 lb per MMBtu of steam output or 9.1E-02 lb per MWh) | Collect a minimum of 2 dscm per run. |
| 11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids | a. CO (or CEMS) | 330 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average) | 3.5E-01 lb per MMBtu of steam output or 3.6 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.2E-03 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input) | 4.3E-03 lb per MMBtu of steam output or 4.5E-02 lb per MWh; or (5.2E-05 lb per MMBtu of steam output or 5.5E-04 lb per MWh) | Collect a minimum of 3 dscm per run. |
| 12. Fuel cell units designed to burn biomass/bio-based solids | a. CO | 910 ppm by volume on a dry basis corrected to 3 percent oxygen | 1.1 lb per MMBtu of steam output or 1.0E+01 lb per MWh | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.0E-02 lb per MMBtu of heat input; or (2.9E-05 [a]lb per MMBtu of heat input) | 3.0E-02 lb per MMBtu of steam output or 2.8E-01 lb per MWh; or (5.1E-05 lb per MMBtu of steam output or 4.1E-04 lb per MWh) | Collect a minimum of 2 dscm per run. |
| 13. Hybrid suspension grate boiler designed to burn biomass/bio-based solids | a. CO (or CEMS) | 1,100 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 1.4 lb per MMBtu of steam output or 12 lb per MWh; 3-run average | 1 hr minimum sampling time. |

| If your boiler or process heater is in this subcategory . . . | For the following pollutants . . . | The emissions must not exceed the following emission limits, except during startup and shutdown . . . | Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . . | Using this specified sampling volume or test run duration . . . |
|---|---|---|---|---|
| | b. Filterable PM (or TSM) | 2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input) | 3.3E-02 lb per MMBtu of steam output or 3.7E-01 lb per MWh; or (5.5E-04 lb per MMBtu of steam output or 6.2E-03 lb per MWh) | Collect a minimum of 3 dscm per run. |
| 14. Units designed to burn liquid fuel | a. HCl | 4.4E-04 lb per MMBtu of heat input | 4.8E-04 lb per MMBtu of steam output or 6.1E-03 lb per MWh | For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run. |
| | b. Mercury | 4.8E-07 [a]lb per MMBtu of heat input | 5.3E-07 [a]lb per MMBtu of steam output or 6.7E-06 [a]lb per MWh | For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 4 dscm. |
| 15. Units designed to burn heavy liquid fuel | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average | 0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 1.3E-02 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input) | 1.5E-02 lb per MMBtu of steam output or 1.8E-01 lb per MWh; or (8.2E-05 lb per MMBtu of steam output or 1.1E-03 lb per MWh) | Collect a minimum of 3 dscm per run. |
| 16. Units designed to burn light liquid fuel | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen | 0.13 lb per MMBtu of steam output or 1.4 lb per MWh | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 1.1E-03 [a]lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input) | 1.2E-03 [a]lb per MMBtu of steam output or 1.6E-02 [a]lb per MWh; or (3.2E-05 lb per MMBtu of steam output or 4.0E-04 lb per MWh) | Collect a minimum of 3 dscm per run. |
| 17. Units designed to burn liquid fuel that are non-continental units | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test | 0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input) | 2.5E-02 lb per MMBtu of steam output or 3.2E-01 lb per MWh; or (9.4E-04 lb per MMBtu of steam output or 1.2E-02 lb per MWh) | Collect a minimum of 4 dscm per run. |

| If your boiler or process heater is in this subcategory . . . | For the following pollutants . . . | The emissions must not exceed the following emission limits, except during startup and shutdown . . . | Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . . | Using this specified sampling volume or test run duration . . . |
|---|---|---|---|---|
| 18. Units designed to burn gas 2 (other) gases | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen | 0.16 lb per MMBtu of steam output or 1.0 lb per MWh | 1 hr minimum sampling time. |
| | b. HCl | 1.7E-03 lb per MMBtu of heat input | 2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh | For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run. |
| | c. Mercury | 7.9E-06 lb per MMBtu of heat input | 1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh | For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 3 dscm. |
| | d. Filterable PM (or TSM) | 6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input) | 1.2E-02 lb per MMBtu of steam output or 7.0E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh) | Collect a minimum of 3 dscm per run. |

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[c] If your affected source is a new or reconstructed affected source that commenced construction or reconstruction after June 4, 2010, and before January 31, 2013, you may comply with the emission limits in Tables 11, 12 or 13 to this subpart until January 31, 2016. On and after January 31, 2016, you must comply with the emission limits in Table 1 to this subpart.

[78 FR 7193, Jan. 31, 2013]

**Table 2 to Subpart DDDDD of Part 63—Emission Limits for Existing Boilers and Process Heaters**

As stated in § 63.7500, you must comply with the following applicable emission limits:

[Units with heat input capacity of 10 million Btu per hour or greater]

| If your boiler or process heater is in this subcategory . . . | For the following pollutants . . . | The emissions must not exceed the following emission limits, except during startup and shutdown . . . | The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . . | Using this specified sampling volume or test run duration . . . |
|---|---|---|---|---|
| 1. Units in all subcategories designed to burn solid fuel | a. HCl | 2.2E-02 lb per MMBtu of heat input | 2.5E-02 lb per MMBtu of steam output or 0.27 lb per MWh | For M26A, Collect a minimum of 1 dscm per run; for M26, collect a minimum of 120 liters per run. |
| | b. Mercury | 5.7E-06 lb per MMBtu of heat input | 6.4E-06 lb per MMBtu of steam output or 7.3E-05 lb per MWh | For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 3 dscm. |
| 2. Units design to burn coal/solid fossil fuel | a. Filterable PM (or TSM) | 4.0E-02 lb per MMBtu of heat input; or (5.3E-05 lb per MMBtu of heat input) | 4.2E-02 lb per MMBtu of steam output or 4.9E-01 lb per MWh; or (5.6E-05 lb per MMBtu of steam output or 6.5E-04 lb per MWh) | Collect a minimum of 2 dscm per run. |
| 3. Pulverized coal boilers designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| 4. Stokers designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 160 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 0.14 lb per MMBtu of steam output or 1.7 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| 5. Fluidized bed units designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |

| If your boiler or process heater is in this subcategory . . . | For the following pollutants . . . | The emissions must not exceed the following emission limits, except during startup and shutdown . . . | The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . . | Using this specified sampling volume or test run duration . . . |
|---|---|---|---|---|
| 6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 1.3E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| 7. Stokers/sloped grate/others designed to burn wet biomass fuel | a. CO (or CEMS) | 1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (720 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 1.4 lb per MMBtu of steam output or 17 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.7E-02 lb per MMBtu of heat input; or (2.4E-04 lb per MMBtu of heat input) | 4.3E-02 lb per MMBtu of steam output or 5.2E-01 lb per MWh; or (2.8E-04 lb per MMBtu of steam output or 3.4E-04 lb per MWh) | Collect a minimum of 2 dscm per run. |
| 8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel | a. CO | 460 ppm by volume on a dry basis corrected to 3 percent oxygen | 4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.2E-01 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input) | 3.7E-01 lb per MMBtu of steam output or 4.5 lb per MWh; or (4.6E-03 lb per MMBtu of steam output or 5.6E-02 lb per MWh) | Collect a minimum of 1 dscm per run. |
| 9. Fluidized bed units designed to burn biomass/bio-based solid | a. CO (or CEMS) | 470 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 4.6E-01 lb per MMBtu of steam output or 5.2 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 1.1E-01 lb per MMBtu of heat input; or (1.2E-03 lb per MMBtu of heat input) | 1.4E-01 lb per MMBtu of steam output or 1.6 lb per MWh; or (1.5E-03 lb per MMBtu of steam output or 1.7E-02 lb per MWh) | Collect a minimum of 1 dscm per run. |

| If your boiler or process heater is in this subcategory . . . | For the following pollutants . . . | The emissions must not exceed the following emission limits, except during startup and shutdown . . . | The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . . | Using this specified sampling volume or test run duration . . . |
|---|---|---|---|---|
| 10. Suspension burners designed to burn biomass/bio-based solid | a. CO (or CEMS) | 2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average) | 1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 5.1E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input) | 5.2E-02 lb per MMBtu of steam output or 7.1E-01 lb per MWh; or (6.6E-03 lb per MMBtu of steam output or 9.1E-02 lb per MWh) | Collect a minimum of 2 dscm per run. |
| 11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solid | a. CO (or CEMS) | 770 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average) | 8.4E-01 lb per MMBtu of steam output or 8.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.8E-01 lb per MMBtu of heat input; or (2.0E-03 lb per MMBtu of heat input) | 3.9E-01 lb per MMBtu of steam output or 3.9 lb per MWh; or (2.8E-03 lb per MMBtu of steam output or 2.8E-02 lb per MWh) | Collect a minimum of 1 dscm per run. |
| 12. Fuel cell units designed to burn biomass/bio-based solid | a. CO | 1,100 ppm by volume on a dry basis corrected to 3 percent oxygen | 2.4 lb per MMBtu of steam output or 12 lb per MWh | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.0E-02 lb per MMBtu of heat input; or (5.8E-03 lb per MMBtu of heat input) | 5.5E-02 lb per MMBtu of steam output or 2.8E-01 lb per MWh; or (1.6E-02 lb per MMBtu of steam output or 8.1E-02 lb per MWh) | Collect a minimum of 2 dscm per run. |
| 13. Hybrid suspension grate units designed to burn biomass/bio-based solid | a. CO (or CEMS) | 2,800 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 2.8 lb per MMBtu of steam output or 31 lb per MWh; 3-run average | 1 hr minimum sampling time. |

| If your boiler or process heater is in this subcategory . . . | For the following pollutants . . . | The emissions must not exceed the following emission limits, except during startup and shutdown . . . | The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . . | Using this specified sampling volume or test run duration . . . |
|---|---|---|---|---|
| | b. Filterable PM (or TSM) | 4.4E-01 lb per MMBtu of heat input; or (4.5E-04 lb per MMBtu of heat input) | 5.5E-01 lb per MMBtu of steam output or 6.2 lb per MWh; or (5.7E-04 lb per MMBtu of steam output or 6.3E-03 lb per MWh) | Collect a minimum of 1 dscm per run. |
| 14. Units designed to burn liquid fuel | a. HCl | 1.1E-03 lb per MMBtu of heat input | 1.4E-03 lb per MMBtu of steam output or 1.6E-02 lb per MWh | For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run. |
| | b. Mercury | 2.0E-06 lb per MMBtu of heat input | 2.5E-06 lb per MMBtu of steam output or 2.8E-05 lb per MWh | For M29, collect a minimum of 3 dscm per run; for M30A or M30B collect a minimum sample as specified in the method, for ASTM D6784 [b]collect a minimum of 2 dscm. |
| 15. Units designed to burn heavy liquid fuel | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average | 0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 6.2E-02 lb per MMBtu of heat input; or (2.0E-04 lb per MMBtu of heat input) | 7.5E-02 lb per MMBtu of steam output or 8.6E-01 lb per MWh; or (2.5E-04 lb per MMBtu of steam output or 2.8E-03 lb per MWh) | Collect a minimum of 1 dscm per run. |
| 16. Units designed to burn light liquid fuel | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen | 0.13 lb per MMBtu of steam output or 1.4 lb per MWh | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 7.9E-03 lb per MMBtu of heat input; or (6.2E-05 lb per MMBtu of heat input) | 9.6E-03 lb per MMBtu of steam output or 1.1E-01 lb per MWh; or (7.5E-05 lb per MMBtu of steam output or 8.6E-04 lb per MWh) | Collect a minimum of 3 dscm per run. |
| 17. Units designed to burn liquid fuel that are non-continental units | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test | 0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.7E-01 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input) | 3.3E-01 lb per MMBtu of steam output or 3.8 lb per MWh; or (1.1E-03 lb per MMBtu of steam output or 1.2E-02 lb per MWh) | Collect a minimum of 2 dscm per run. |

| If your boiler or process heater is in this subcategory . . . | For the following pollutants . . . | The emissions must not exceed the following emission limits, except during startup and shutdown . . . | The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . . | Using this specified sampling volume or test run duration . . . |
|---|---|---|---|---|
| 18. Units designed to burn gas 2 (other) gases | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen | 0.16 lb per MMBtu of steam output or 1.0 lb per MWh | 1 hr minimum sampling time. |
| | b. HCl | 1.7E-03 lb per MMBtu of heat input | 2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh | For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run. |
| | c. Mercury | 7.9E-06 lb per MMBtu of heat input | 1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh | For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 2 dscm. |
| | d. Filterable PM (or TSM) | 6.7E-03 lb per MMBtu of heat input or (2.1E-04 lb per MMBtu of heat input) | 1.2E-02 lb per MMBtu of steam output or 7.0E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh) | Collect a minimum of 3 dscm per run. |

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote a, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[78 FR 7195, Jan. 31, 2013]

**Table 3 to Subpart DDDDD of Part 63—Work Practice Standards**

As stated in § 63.7500, you must comply with the following applicable work practice standards:

| If your unit is . . . | You must meet the following . . . |
|---|---|
| 1. A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid, or a limited use boiler or process heater | Conduct a tune-up of the boiler or process heater every 5 years as specified in § 63.7540. |

| | |
|---|---|
| 2. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of less than 10 million Btu per hour in the unit designed to burn heavy liquid or unit designed to burn solid fuel subcategories; or a new or existing boiler or process heater with heat input capacity of less than 10 million Btu per hour, but greater than 5 million Btu per hour, in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid | Conduct a tune-up of the boiler or process heater biennially as specified in § 63.7540. |
| 3. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater | Conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions under this subpart. Units in all other subcategories will conduct this tune-up as a work practice for dioxins/furans. |
| 4. An existing boiler or process heater located at a major source facility, not including limited use units | Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in § 63.7575: |
| | a. A visual inspection of the boiler or process heater system. |
| | b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints. |
| | c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator. |
| | d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage. |
| | e. A review of the facility's energy management practices and provide recommendations for improvements consistent with the definition of energy management practices, if identified. |
| | f. A list of cost-effective energy conservation measures that are within the facility's control. |
| | g. A list of the energy savings potential of the energy conservation measures identified. |
| | h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments. |

| | |
|---|---|
| 5. An existing or new boiler or process heater subject to emission limits in Table 1 or 2 or 11 through 13 to this subpart during startup | You must operate all CMS during startup.<br>For startup of a boiler or process heater, you must use one or a combination of the following clean fuels: natural gas, synthetic natural gas, propane, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, and liquefied petroleum gas. |
| | If you start firing coal/solid fossil fuel, biomass/bio-based solids, heavy liquid fuel, or gas 2 (other) gases, you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, selective non-catalytic reduction (SNCR), and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, SNCR, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose. |
| | You must comply with all applicable emission limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of startup, as specified in § 63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in § 63.7555. |
| 6. An existing or new boiler or process heater subject to emission limits in Tables 1 or 2 or 11 through 13 to this subpart during shutdown | You must operate all CMS during shutdown.<br>While firing coal/solid fossil fuel, biomass/bio-based solids, heavy liquid fuel, or gas 2 (other) gases during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, SNCR, and SCR. |
| | You must comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of shutdown, as specified in § 63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in § 63.7555. |

[78 FR 7198, Jan. 31, 2013]

**Table 4 to Subpart DDDDD of Part 63—Operating Limits for Boilers and Process Heaters**

As stated in § 63.7500, you must comply with the applicable operating limits:

| When complying with a Table 1, 2, 11, 12, or 13 numerical emission limit using . . . | You must meet these operating limits . . . |
|---|---|
| 1. Wet PM scrubber control on a boiler not using a PM CPMS | Maintain the 30-day rolling average pressure drop and the 30-day rolling average liquid flow rate at or above the lowest one-hour average pressure drop and the lowest one-hour average liquid flow rate, respectively, measured during the most recent performance test demonstrating compliance with the PM emission limitation according to § 63.7530(b) and Table 7 to this subpart. |

| When complying with a Table 1, 2, 11, 12, or 13 numerical emission limit using . . . | You must meet these operating limits . . . |
|---|---|
| 2. Wet acid gas (HCl) scrubber control on a boiler not using a HCl CEMS | Maintain the 30-day rolling average effluent pH at or above the lowest one-hour average pH and the 30-day rolling average liquid flow rate at or above the lowest one-hour average liquid flow rate measured during the most recent performance test demonstrating compliance with the HCl emission limitation according to § 63.7530(b) and Table 7 to this subpart. |
| 3. Fabric filter control on units not using a PM CPMS | a. Maintain opacity to less than or equal to 10 percent opacity (daily block average); or |
| | b. Install and operate a bag leak detection system according to § 63.7525 and operate the fabric filter such that the bag leak detection system alert is not activated more than 5 percent of the operating time during each 6-month period. |
| 4. Electrostatic precipitator control on units not using a PM CPMS | a. This option is for boilers and process heaters that operate dry control systems (i.e., an ESP without a wet scrubber). Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity (daily block average); or |
| | b. This option is only for boilers and process heaters not subject to PM CPMS or continuous compliance with an opacity limit (i.e., COMS). Maintain the 30-day rolling average total secondary electric power input of the electrostatic precipitator at or above the operating limits established during the performance test according to § 63.7530(b) and Table 7 to this subpart. |
| 5. Dry scrubber or carbon injection control on a boiler not using a mercury CEMS | Maintain the minimum sorbent or carbon injection rate as defined in § 63.7575 of this subpart. |
| 6. Any other add-on air pollution control type on units not using a PM CPMS | This option is for boilers and process heaters that operate dry control systems. Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity (daily block average). |
| 7. Fuel analysis | Maintain the fuel type or fuel mixture such that the applicable emission rates calculated according to § 63.7530(c)(1), (2) and/or (3) is less than the applicable emission limits. |
| 8. Performance testing | For boilers and process heaters that demonstrate compliance with a performance test, maintain the operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the most recent performance test. |
| 9. Oxygen analyzer system | For boilers and process heaters subject to a CO emission limit that demonstrate compliance with an $O_2$analyzer system as specified in § 63.7525(a), maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen concentration measured during the most recent CO performance test, as specified in Table 8. This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in § 63.7525(a). |
| 10. $SO_2$CEMS | For boilers or process heaters subject to an HCl emission limit that demonstrate compliance with an $SO_2$CEMS, maintain the 30-day rolling average $SO_2$emission rate at or below the highest hourly average $SO_2$concentration measured during the most recent HCl performance test, as specified in Table 8. |

[78 FR 7199, Jan. 31, 2013]

**Table 5 to Subpart DDDDD of Part 63—Performance Testing Requirements**

As stated in § 63.7520, you must comply with the following requirements for performance testing for existing, new or reconstructed affected sources:

| To conduct a performance test for the following pollutant... | You must... | Using... |
|---|---|---|
| 1. Filterable PM | a. Select sampling ports location and the number of traverse points | Method 1 at 40 CFR part 60, appendix A-1 of this chapter. |
| | b. Determine velocity and volumetric flow-rate of the stack gas | Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 to part 60 of this chapter. |
| | c. Determine oxygen or carbon dioxide concentration of the stack gas | Method 3A or 3B at 40 CFR part 60, appendix A-2 to part 60 of this chapter, or ANSI/ASME PTC 19.10-1981.[a] |
| | d. Measure the moisture content of the stack gas | Method 4 at 40 CFR part 60, appendix A-3 of this chapter. |
| | e. Measure the PM emission concentration | Method 5 or 17 (positive pressure fabric filters must use Method 5D) at 40 CFR part 60, appendix A-3 or A-6 of this chapter. |
| | f. Convert emissions concentration to lb per MMBtu emission rates | Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter. |
| 2. TSM | a. Select sampling ports location and the number of traverse points | Method 1 at 40 CFR part 60, appendix A-1 of this chapter. |
| | b. Determine velocity and volumetric flow-rate of the stack gas | Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 of this chapter. |
| | c. Determine oxygen or carbon dioxide concentration of the stack gas | Method 3A or 3B at 40 CFR part 60, appendix A-1 of this chapter, or ANSI/ASME PTC 19.10-1981.[a] |
| | d. Measure the moisture content of the stack gas | Method 4 at 40 CFR part 60, appendix A-3 of this chapter. |
| | e. Measure the TSM emission concentration | Method 29 at 40 CFR part 60, appendix A-8 of this chapter |
| | f. Convert emissions concentration to lb per MMBtu emission rates | Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter. |
| 3. Hydrogen chloride | a. Select sampling ports location and the number of traverse points | Method 1 at 40 CFR part 60, appendix A-1 of this chapter. |
| | b. Determine velocity and volumetric flow-rate of the stack gas | Method 2, 2F, or 2G at 40 CFR part 60, appendix A-2 of this chapter. |
| | c. Determine oxygen or carbon dioxide concentration of the stack gas | Method 3A or 3B at 40 CFR part 60, appendix A-2 of this chapter, or ANSI/ASME PTC 19.10-1981.[a] |
| | d. Measure the moisture content of the stack gas | Method 4 at 40 CFR part 60, appendix A-3 of this chapter. |
| | e. Measure the hydrogen chloride emission concentration | Method 26 or 26A (M26 or M26A) at 40 CFR part 60, appendix A-8 of this chapter. |

| To conduct a performance test for the following pollutant... | You must... | Using... |
|---|---|---|
| | f. Convert emissions concentration to lb per MMBtu emission rates | Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter. |
| 4. Mercury | a. Select sampling ports location and the number of traverse points | Method 1 at 40 CFR part 60, appendix A-1 of this chapter. |
| | b. Determine velocity and volumetric flow-rate of the stack gas | Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 of this chapter. |
| | c. Determine oxygen or carbon dioxide concentration of the stack gas | Method 3A or 3B at 40 CFR part 60, appendix A-1 of this chapter, or ANSI/ASME PTC 19.10-1981.[a] |
| | d. Measure the moisture content of the stack gas | Method 4 at 40 CFR part 60, appendix A-3 of this chapter. |
| | e. Measure the mercury emission concentration | Method 29, 30A, or 30B (M29, M30A, or M30B) at 40 CFR part 60, appendix A-8 of this chapter or Method 101A at 40 CFR part 61, appendix B of this chapter, or ASTM Method D6784.[a] |
| | f. Convert emissions concentration to lb per MMBtu emission rates | Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter. |
| 5. CO | a. Select the sampling ports location and the number of traverse points | Method 1 at 40 CFR part 60, appendix A-1 of this chapter. |
| | b. Determine oxygen concentration of the stack gas | Method 3A or 3B at 40 CFR part 60, appendix A-3 of this chapter, or ASTM D6522-00 (Reapproved 2005), or ANSI/ASME PTC 19.10-1981.[a] |
| | c. Measure the moisture content of the stack gas | Method 4 at 40 CFR part 60, appendix A-3 of this chapter. |
| | d. Measure the CO emission concentration | Method 10 at 40 CFR part 60, appendix A-4 of this chapter. Use a measurement span value of 2 times the concentration of the applicable emission limit. |

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7200, Jan. 31, 2013]

**Table 6 to Subpart DDDDD of Part 63—Fuel Analysis Requirements**

As stated in § 63.7521, you must comply with the following requirements for fuel analysis testing for existing, new or reconstructed affected sources. However, equivalent methods (as defined in § 63.7575) may be used in lieu of the prescribed methods at the discretion of the source owner or operator:

| To conduct a fuel analysis for the following pollutant . . . | You must . . . | Using . . . |
|---|---|---|
| 1. Mercury | a. Collect fuel samples | Procedure in § 63.7521(c) or ASTM D5192 [a], or ASTM D7430 [a], or ASTM D6883 [a], or ASTM D2234/D2234M [a](for coal) or EPA 1631 or EPA 1631E or ASTM D6323 [a](for solid), or EPA 821-R-01-013 (for liquid or solid), or ASTM D4177 [a](for liquid), or ASTM D4057 [a](for liquid), or equivalent. |
| | b. Composite fuel samples | Procedure in § 63.7521(d) or equivalent. |

| To conduct a fuel analysis for the following pollutant . . . | You must . . . | Using . . . |
|---|---|---|
| | c. Prepare composited fuel samples | EPA SW-846-3050B [a](for solid samples), EPA SW-846-3020A [a](for liquid samples), ASTM D2013/D2013M [a](for coal), ASTM D5198 [a](for biomass), or EPA 3050 [a](for solid fuel), or EPA 821-R-01-013 [a](for liquid or solid), or equivalent. |
| | d. Determine heat content of the fuel type | ASTM D5865 [a](for coal) or ASTM E711 [a](for biomass), or ASTM D5864 [a]for liquids and other solids, or ASTM D240 [a]or equivalent. |
| | e. Determine moisture content of the fuel type | ASTM D3173 [a], ASTM E871 [a], or ASTM D5864 [a], or ASTM D240, or ASTM D95 [a](for liquid fuels), or ASTM D4006 [a](for liquid fuels), or ASTM D4177 [a](for liquid fuels) or ASTM D4057 [a](for liquid fuels), or equivalent. |
| | f. Measure mercury concentration in fuel sample | ASTM D6722 [a](for coal), EPA SW-846-7471B [a](for solid samples), or EPA SW-846-7470A [a](for liquid samples), or equivalent. |
| | g. Convert concentration into units of pounds of mercury per MMBtu of heat content | Equation 8 in § 63.7530. |
| | h. Calculate the mercury emission rate from the boiler or process heater in units of pounds per million Btu | Equations 10 and 12 in § 63.7530. |
| 2. HCl | a. Collect fuel samples | Procedure in § 63.7521(c) or ASTM D5192 [a], or ASTM D7430 [a], or ASTM D6883 [a], or ASTM D2234/D2234M [a](for coal) or ASTM D6323 [a](for coal or biomass), ASTM D4177 [a](for liquid fuels) or ASTM D4057 [a](for liquid fuels), or equivalent. |
| | b. Composite fuel samples | Procedure in § 63.7521(d) or equivalent. |
| | c. Prepare composited fuel samples | EPA SW-846-3050B [a](for solid samples), EPA SW-846-3020A [a](for liquid samples), ASTM D2013/D2013M§[a](for coal), or ASTM D5198§[a](for biomass), or EPA 3050 [a]or equivalent. |
| | d. Determine heat content of the fuel type | ASTM D5865 [a](for coal) or ASTM E711 [a](for biomass), ASTM D5864, ASTM D240 [a]or equivalent. |
| | e. Determine moisture content of the fuel type | ASTM D3173 [a]or ASTM E871 [a], or D5864 [a], or ASTM D240 [a], or ASTM D95[a](for liquid fuels), or ASTM D4006 [a](for liquid fuels), or ASTM D4177 [a](for liquid fuels) or ASTM D4057 [a](for liquid fuels) or equivalent. |
| | f. Measure chlorine concentration in fuel sample | EPA SW-846-9250 [a], ASTM D6721 [a], ASTM D4208 [a](for coal), or EPA SW-846-5050 [a]or ASTM E776 [a](for solid fuel), or EPA SW-846-9056 [a]or SW-846-9076 [a](for solids or liquids) or equivalent. |
| | g. Convert concentrations into units of pounds of HCl per MMBtu of heat content | Equation 7 in § 63.7530. |
| | h. Calculate the HCl emission rate from the boiler or process heater in units of pounds per million Btu | Equations 10 and 11 in § 63.7530. |
| 3. Mercury Fuel Specification for other gas 1 fuels | a. Measure mercury concentration in the fuel sample and convert to units of micrograms per cubic meter | Method 30B (M30B) at 40 CFR part 60, appendix A-8 of this chapter or ASTM D5954 [a], ASTM D6350 [a], ISO 6978-1:2003(E) [a], or ISO 6978-2:2003(E) [a], or EPA-1631 [a]or equivalent. |

| To conduct a fuel analysis for the following pollutant . . . | You must . . . | Using . . . |
|---|---|---|
| | b. Measure mercury concentration in the exhaust gas when firing only the other gas 1 fuel is fired in the boiler or process heater | Method 29, 30A, or 30B (M29, M30A, or M30B) at 40 CFR part 60, appendix A-8 of this chapter or Method 101A or Method 102 at 40 CFR part 61, appendix B of this chapter, or ASTM Method D6784 [a]or equivalent. |
| 4. TSM for solid fuels | a. Collect fuel samples | Procedure in § 63.7521(c) or ASTM D5192 [a], or ASTM D7430 [a], or ASTM D6883 [a], or ASTM D2234/D2234M [a](for coal) or ASTM D6323 [a](for coal or biomass), or ASTM D4177 [a],(for liquid fuels)or ASTM D4057 [a](for liquid fuels),or equivalent. |
| | b. Composite fuel samples | Procedure in § 63.7521(d) or equivalent. |
| | c. Prepare composited fuel samples | EPA SW-846-3050B [a](for solid samples), EPA SW-846-3020A [a](for liquid samples), ASTM D2013/D2013M [a](for coal), ASTM D5198 [a]or TAPPI T266 [a](for biomass), or EPA 3050 [a]or equivalent. |
| | d. Determine heat content of the fuel type | ASTM D5865 [a](for coal) or ASTM E711 [a](for biomass), or ASTM D5864 [a]for liquids and other solids, or ASTM D240 [a]or equivalent. |
| | e. Determine moisture content of the fuel type | ASTM D3173 [a]or ASTM E871 [a], or D5864, or ASTM D240 [a], or ASTM D95 [a](for liquid fuels), or ASTM D4006[a](for liquid fuels), or ASTM D4177 [a](for liquid fuels) or ASTM D4057 [a](for liquid fuels), or equivalent. |
| | f. Measure TSM concentration in fuel sample | ASTM D3683 [a], or ASTM D4606 [a], or ASTM D6357 [a]or EPA 200.8 [a]or EPA SW-846-6020 [a], or EPA SW-846-6020A [a], or EPA SW-846-6010C [a], EPA 7060 [a]or EPA 7060A [a](for arsenic only), or EPA SW-846-7740 [a](for selenium only). |
| | g. Convert concentrations into units of pounds of TSM per MMBtu of heat content | Equation 9 in § 63.7530. |
| | h. Calculate the TSM emission rate from the boiler or process heater in units of pounds per million Btu | Equations 10 and 13 in § 63.7530. |

[a] Incorporated by reference, see § 63.14.

[78 FR 7201, Jan. 31, 2013]

**Table 7 to Subpart DDDDD of Part 63—Establishing Operating Limits**

As stated in § 63.7520, you must comply with the following requirements for establishing operating limits:

| If you have an applicable emission limit for . . . | And your operating limits are based on . . . | You must . . . | Using . . . | According to the following requirements |
|---|---|---|---|---|
| 1. PM, TSM, or mercury | a. Wet scrubber operating parameters | i. Establish a site-specific minimum scrubber pressure drop and minimum flow rate operating limit according to § 63.7530(b) | (1) Data from the scrubber pressure drop and liquid flow rate monitors and the PM or mercury performance test | (a) You must collect scrubber pressure drop and liquid flow rate data every 15 minutes during the entire period of the performance tests. |
| | | | | (b) Determine the lowest hourly average scrubber pressure drop and liquid flow rate by computing the hourly averages using all of the 15-minute readings taken during each performance test. |
| | b. Electrostatic precipitator operating parameters (option only for units that operate wet scrubbers) | i. Establish a site-specific minimum total secondary electric power input according to § 63.7530(b) | (1) Data from the voltage and secondary amperage monitors during the PM or mercury performance test | (a) You must collect secondary voltage and secondary amperage for each ESP cell and calculate total secondary electric power input data every 15 minutes during the entire period of the performance tests. |
| | | | | (b) Determine the average total secondary electric power input by computing the hourly averages using all of the 15-minute readings taken during each performance test. |
| 2. HCl | a. Wet scrubber operating parameters | i. Establish site-specific minimum pressure drop, effluent pH, and flow rate operating limits according to § 63.7530(b) | (1) Data from the pressure drop, pH, and liquid flow-rate monitors and the HCl performance test | (a) You must collect pH and liquid flow-rate data every 15 minutes during the entire period of the performance tests. |
| | | | | (b) Determine the hourly average pH and liquid flow rate by computing the hourly averages using all of the 15-minute readings taken during each performance test. |

| If you have an applicable emission limit for . . . | And your operating limits are based on . . . | You must . . . | Using . . . | According to the following requirements |
|---|---|---|---|---|
| | b. Dry scrubber operating parameters | i. Establish a site-specific minimum sorbent injection rate operating limit according to § 63.7530(b). If different acid gas sorbents are used during the HCl performance test, the average value for each sorbent becomes the site-specific operating limit for that sorbent | (1) Data from the sorbent injection rate monitors and HCl or mercury performance test | (a) You must collect sorbent injection rate data every 15 minutes during the entire period of the performance tests. |
| | | | | (b) Determine the hourly average sorbent injection rate by computing the hourly averages using all of the 15-minute readings taken during each performance test. |
| | | | | (c) Determine the lowest hourly average of the three test run averages established during the performance test as your operating limit. When your unit operates at lower loads, multiply your sorbent injection rate by the load fraction (e.g., for 50 percent load, multiply the injection rate operating limit by 0.5) to determine the required injection rate. |
| | c. Alternative Maximum $SO_2$ emission rate | i. Establish a site-specific maximum $SO_2$ emission rate operating limit according to § 63.7530(b) | (1) Data from $SO_2$ CEMS and the HCl performance test | (a) You must collect the $SO_2$ emissions data according to § 63.7525(m) during the most recent HCl performance tests. |
| | | | | (b) The maximum $SO_2$ emission rate is equal to the lowest hourly average $SO_2$ emission rate measured during the most recent HCl performance tests. |
| 3. Mercury | a. Activated carbon injection | i. Establish a site-specific minimum activated carbon injection rate operating limit according to § 63.7530(b) | (1) Data from the activated carbon rate monitors and mercury performance test | (a) You must collect activated carbon injection rate data every 15 minutes during the entire period of the performance tests. |
| | | | | (b) Determine the hourly average activated carbon injection rate by computing the hourly averages using all of the 15-minute readings taken during each performance test. |

| If you have an applicable emission limit for . . . | And your operating limits are based on . . . | You must . . . | Using . . . | According to the following requirements |
|---|---|---|---|---|
| | | | | (c) Determine the lowest hourly average established during the performance test as your operating limit. When your unit operates at lower loads, multiply your activated carbon injection rate by the load fraction (e.g., actual heat input divided by heat input during performance test, for 50 percent load, multiply the injection rate operating limit by 0.5) to determine the required injection rate. |
| 4. Carbon monoxide | a. Oxygen | i. Establish a unit-specific limit for minimum oxygen level according to § 63.7520 | (1) Data from the oxygen analyzer system specified in § 63.7525(a) | (a) You must collect oxygen data every 15 minutes during the entire period of the performance tests. |
| | | | | (b) Determine the hourly average oxygen concentration by computing the hourly averages using all of the 15-minute readings taken during each performance test. |
| | | | | (c) Determine the lowest hourly average established during the performance test as your minimum operating limit. |
| 5. Any pollutant for which compliance is demonstrated by a performance test | a. Boiler or process heater operating load | i. Establish a unit specific limit for maximum operating load according to § 63.7520(c) | (1) Data from the operating load monitors or from steam generation monitors | (a) You must collect operating load or steam generation data every 15 minutes during the entire period of the performance test. |
| | | | | (b) Determine the average operating load by computing the hourly averages using all of the 15-minute readings taken during each performance test. |
| | | | | (c) Determine the average of the three test run averages during the performance test, and multiply this by 1.1 (110 percent) as your operating limit. |

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7203, Jan. 31, 2013]

**Table 8 to Subpart DDDDD of Part 63—Demonstrating Continuous Compliance**

As stated in § 63.7540, you must show continuous compliance with the emission limitations for each boiler or process heater according to the following:

| If you must meet the following operating limits or work practice standards . . . | You must demonstrate continuous compliance by . . . |
|---|---|
| 1. Opacity | a. Collecting the opacity monitoring system data according to § 63.7525(c) and § 63.7535; and |
| | b. Reducing the opacity monitoring data to 6-minute averages; and |
| | c. Maintaining opacity to less than or equal to 10 percent (daily block average). |
| 2. PM CPMS | a. Collecting the PM CPMS output data according to § 63.7525; |
| | b. Reducing the data to 30-day rolling averages; and |
| | c. Maintaining the 30-day rolling average PM CPMS output data to less than the operating limit established during the performance test according to § 63.7530(b)(4). |
| 3. Fabric Filter Bag Leak Detection Operation | Installing and operating a bag leak detection system according to § 63.7525 and operating the fabric filter such that the requirements in § 63.7540(a)(9) are met. |
| 4. Wet Scrubber Pressure Drop and Liquid Flow-rate | a. Collecting the pressure drop and liquid flow rate monitoring system data according to §§ 63.7525 and 63.7535; and |
| | b. Reducing the data to 30-day rolling averages; and |
| | c. Maintaining the 30-day rolling average pressure drop and liquid flow-rate at or above the operating limits established during the performance test according to § 63.7530(b). |
| 5. Wet Scrubber pH | a. Collecting the pH monitoring system data according to §§ 63.7525 and 63.7535; and |
| | b. Reducing the data to 30-day rolling averages; and |
| | c. Maintaining the 30-day rolling average pH at or above the operating limit established during the performance test according to § 63.7530(b). |
| 6. Dry Scrubber Sorbent or Carbon Injection Rate | a. Collecting the sorbent or carbon injection rate monitoring system data for the dry scrubber according to §§ 63.7525 and 63.7535; and |
| | b. Reducing the data to 30-day rolling averages; and |
| | c. Maintaining the 30-day rolling average sorbent or carbon injection rate at or above the minimum sorbent or carbon injection rate as defined in § 63.7575. |
| 7. Electrostatic Precipitator Total Secondary Electric Power Input | a. Collecting the total secondary electric power input monitoring system data for the electrostatic precipitator according to §§ 63.7525 and 63.7535; and |
| | b. Reducing the data to 30-day rolling averages; and |
| | c. Maintaining the 30-day rolling average total secondary electric power input at or above the operating limits established during the performance test according to § 63.7530(b). |
| 8. Emission limits using fuel analysis | a. Conduct monthly fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart; and |
| | b. Reduce the data to 12-month rolling averages; and |
| | c. Maintain the 12-month rolling average at or below the applicable emission limit for HCl or mercury or TSM in Tables 1 and 2 or 11 through 13 to this subpart. |
| 9. Oxygen content | a. Continuously monitor the oxygen content using an oxygen analyzer system according to § 63.7525(a). This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in § 63.7525(a)(2). |
| | b. Reducing the data to 30-day rolling averages; and |

| If you must meet the following operating limits or work practice standards . . . | You must demonstrate continuous compliance by . . . |
|---|---|
| | c. Maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen level measured during the most recent CO performance test. |
| 10. Boiler or process heater operating load | a. Collecting operating load data or steam generation data every 15 minutes. |
| | b. Maintaining the operating load such that it does not exceed 110 percent of the highest hourly average operating load recorded during the most recent performance test according to § 63.7520(c). |
| 11. $SO_2$emissions using $SO_2$CEMS | a. Collecting the $SO_2$CEMS output data according to § 63.7525; |
| | b. Reducing the data to 30-day rolling averages; and |
| | c. Maintaining the 30-day rolling average $SO_2$CEMS emission rate to a level at or below the minimum hourly $SO_2$rate measured during the most recent HCl performance test according to § 63.7530. |

[78 FR 7204, Jan. 31, 2013]

**Table 9 to Subpart DDDDD of Part 63—Reporting Requirements**

As stated in § 63.7550, you must comply with the following requirements for reports:

| You must submit a(n) | The report must contain . . . | You must submit the report . . . |
|---|---|---|
| 1. Compliance report | a. Information required in § 63.7550(c)(1) through (5); and | Semiannually, annually, biennially, or every 5 years according to the requirements in § 63.7550(b). |
| | b. If there are no deviations from any emission limitation (emission limit and operating limit) that applies to you and there are no deviations from the requirements for work practice standards in Table 3 to this subpart that apply to you, a statement that there were no deviations from the emission limitations and work practice standards during the reporting period. If there were no periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which the CMSs were out-of-control during the reporting period; and | |
| | c. If you have a deviation from any emission limitation (emission limit and operating limit) where you are not using a CMS to comply with that emission limit or operating limit, or a deviation from a work practice standard during the reporting period, the report must contain the information in § 63.7550(d); and | |
| | d. If there were periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in § 63.8(c)(7), or otherwise not operating, the report must contain the information in § 63.7550(e) | |

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7205, Jan. 31, 2013]

**Table 10 to Subpart DDDDD of Part 63—Applicability of General Provisions to Subpart DDDDD**

As stated in § 63.7565, you must comply with the applicable General Provisions according to the following:

| Citation | Subject | Applies to subpart DDDDD |
|---|---|---|
| § 63.1 | Applicability | Yes. |
| § 63.2 | Definitions | Yes. Additional terms defined in § 63.7575 |
| § 63.3 | Units and Abbreviations | Yes. |
| § 63.4 | Prohibited Activities and Circumvention | Yes. |
| § 63.5 | Preconstruction Review and Notification Requirements | Yes. |
| § 63.6(a), (b)(1)-(b)(5), (b)(7), (c) | Compliance with Standards and Maintenance Requirements | Yes. |
| § 63.6(e)(1)(i) | General duty to minimize emissions. | No. See § 63.7500(a)(3) for the general duty requirement. |
| § 63.6(e)(1)(ii) | Requirement to correct malfunctions as soon as practicable. | No. |
| § 63.6(e)(3) | Startup, shutdown, and malfunction plan requirements. | No. |
| § 63.6(f)(1) | Startup, shutdown, and malfunction exemptions for compliance with non-opacity emission standards. | No. |
| § 63.6(f)(2) and (3) | Compliance with non-opacity emission standards. | Yes. |
| § 63.6(g) | Use of alternative standards | Yes. |
| § 63.6(h)(1) | Startup, shutdown, and malfunction exemptions to opacity standards. | No. See § 63.7500(a). |
| § 63.6(h)(2) to (h)(9) | Determining compliance with opacity emission standards | Yes. |
| § 63.6(i) | Extension of compliance | Yes. Note: Facilities may also request extensions of compliance for the installation of combined heat and power, waste heat recovery, or gas pipeline or fuel feeding infrastructure as a means of complying with this subpart. |
| § 63.6(j) | Presidential exemption. | Yes. |
| § 63.7(a), (b), (c), and (d) | Performance Testing Requirements | Yes. |
| § 63.7(e)(1) | Conditions for conducting performance tests | No. Subpart DDDDD specifies conditions for conducting performance tests at § 63.7520(a) to (c). |
| § 63.7(e)(2)-(e)(9), (f), (g), and (h) | Performance Testing Requirements | Yes. |
| § 63.8(a) and (b) | Applicability and Conduct of Monitoring | Yes. |

| Citation | Subject | Applies to subpart DDDDD |
|---|---|---|
| § 63.8(c)(1) | Operation and maintenance of CMS | Yes. |
| § 63.8(c)(1)(i) | General duty to minimize emissions and CMS operation | No. See § 63.7500(a)(3). |
| § 63.8(c)(1)(ii) | Operation and maintenance of CMS | Yes. |
| § 63.8(c)(1)(iii) | Startup, shutdown, and malfunction plans for CMS | No. |
| § 63.8(c)(2) to (c)(9) | Operation and maintenance of CMS | Yes. |
| § 63.8(d)(1) and (2) | Monitoring Requirements, Quality Control Program | Yes. |
| § 63.8(d)(3) | Written procedures for CMS | Yes, except for the last sentence, which refers to a startup, shutdown, and malfunction plan. Startup, shutdown, and malfunction plans are not required. |
| § 63.8(e) | Performance evaluation of a CMS | Yes. |
| § 63.8(f) | Use of an alternative monitoring method. | Yes. |
| § 63.8(g) | Reduction of monitoring data | Yes. |
| § 63.9 | Notification Requirements | Yes. |
| § 63.10(a), (b)(1) | Recordkeeping and Reporting Requirements | Yes. |
| § 63.10(b)(2)(i) | Recordkeeping of occurrence and duration of startups or shutdowns | Yes. |
| § 63.10(b)(2)(ii) | Recordkeeping of malfunctions | No. See § 63.7555(d)(7) for recordkeeping of occurrence and duration and § 63.7555(d)(8) for actions taken during malfunctions. |
| § 63.10(b)(2)(iii) | Maintenance records | Yes. |
| § 63.10(b)(2)(iv) and (v) | Actions taken to minimize emissions during startup, shutdown, or malfunction | No. |
| § 63.10(b)(2)(vi) | Recordkeeping for CMS malfunctions | Yes. |
| § 63.10(b)(2)(vii) to (xiv) | Other CMS requirements | Yes. |
| § 63.10(b)(3) | Recordkeeping requirements for applicability determinations | No. |
| § 63.10(c)(1) to (9) | Recordkeeping for sources with CMS | Yes. |
| § 63.10(c)(10) and (11) | Recording nature and cause of malfunctions, and corrective actions | No. See § 63.7555(d)(7) for recordkeeping of occurrence and duration and § 63.7555(d)(8) for actions taken during malfunctions. |
| § 63.10(c)(12) and (13) | Recordkeeping for sources with CMS | Yes. |
| § 63.10(c)(15) | Use of startup, shutdown, and malfunction plan | No. |

| Citation | Subject | Applies to subpart DDDDD |
|---|---|---|
| § 63.10(d)(1) and (2) | General reporting requirements | Yes. |
| § 63.10(d)(3) | Reporting opacity or visible emission observation results | No. |
| § 63.10(d)(4) | Progress reports under an extension of compliance | Yes. |
| § 63.10(d)(5) | Startup, shutdown, and malfunction reports | No. See § 63.7550(c)(11) for malfunction reporting requirements. |
| § 63.10(e) | Additional reporting requirements for sources with CMS | Yes. |
| § 63.10(f) | Waiver of recordkeeping or reporting requirements | Yes. |
| § 63.11 | Control Device Requirements | No. |
| § 63.12 | State Authority and Delegation | Yes. |
| § 63.13-63.16 | Addresses, Incorporation by Reference, Availability of Information, Performance Track Provisions | Yes. |
| § 63.1(a)(5),(a)(7)-(a)(9), (b)(2), (c)(3)-(4), (d), 63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv), 63.8(a)(3), 63.9(b)(3), (h)(4), 63.10(c)(2)-(4), (c)(9). | Reserved | No. |

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7205, Jan. 31, 2013]

**Table 11 to Subpart DDDDD of Part 63—Toxic Equivalency Factors for Dioxins/Furans**

Table 11 to Subpart DDDDD of Part 63—Toxic Equivalency Factors for Dioxins/Furans

| Dioxin/furan congener | Toxic equivalency factor |
|---|---|
| 2,3,7,8-tetrachlorinated dibenzo-p-dioxin | 1 |
| 1,2,3,7,8-pentachlorinated dibenzo-p-dioxin | 1 |
| 1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin | 0.1 |
| 1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin | 0.1 |
| 1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin | 0.1 |
| 1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin | 0.01 |
| octachlorinated dibenzo-p-dioxin | 0.0003 |
| 2,3,7,8-tetrachlorinated dibenzofuran | 0.1 |
| 2,3,4,7,8-pentachlorinated dibenzofuran | 0.3 |
| 1,2,3,7,8-pentachlorinated dibenzofuran | 0.03 |
| 1,2,3,4,7,8-hexachlorinated dibenzofuran | 0.1 |
| 1,2,3,6,7,8-hexachlorinated dibenzofuran | 0.1 |
| 1,2,3,7,8,9-hexachlorinated dibenzofuran | 0.1 |
| 2,3,4,6,7,8-hexachlorinated dibenzofuran | 0.1 |

| Dioxin/furan congener | Toxic equivalency factor |
|---|---|
| 1,2,3,4,6,7,8-heptachlorinated dibenzofuran | 0.01 |
| 1,2,3,4,7,8,9-heptachlorinated dibenzofuran | 0.01 |
| octachlorinated dibenzofuran | 0.0003 |

[76 FR 15664, Mar. 21, 2011]

EDITORIAL NOTE: At 78 FR 7206, Jan. 31, 2013, Table 11 was added, effective Apr. 1, 2013. However Table 11 could not be added as a Table 11 is already in existence.

**Table 12 to Subpart DDDDD of Part 63—Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After June 4, 2010, and Before May 20, 2011**

| If your boiler or process heater is in this subcategory | For the following pollutants | The emissions must not exceed the following emission limits, except during periods of startup and shutdown | Using this specified sampling volume or test run duration |
|---|---|---|---|
| 1. Units in all subcategories designed to burn solid fuel | a. Mercury | 3.5E-06 lb per MMBtu of heat input | For M29, collect a minimum of 2 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [a]collect a minimum of 2 dscm. |
| 2. Units in all subcategories designed to burn solid fuel that combust at least 10 percent biomass/bio-based solids on an annual heat input basis and less than 10 percent coal/solid fossil fuels on an annual heat input basis | a. Particulate Matter | 0.008 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr) | Collect a minimum of 1 dscm per run. |
| | b. Hydrogen Chloride | 0.004 lb per MMBtu of heat input | For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run. |
| 3. Units in all subcategories designed to burn solid fuel that combust at least 10 percent coal/solid fossil fuels on an annual heat input basis and less than 10 percent biomass/bio-based solids on an annual heat input basis | a. Particulate Matter | 0.0011 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr) | Collect a minimum of 3 dscm per run. |
| | b. Hydrogen Chloride | 0.0022 lb per MMBtu of heat input | For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run. |
| 4. Units designed to burn pulverized coal/solid fossil fuel | a. CO | 90 ppm by volume on a dry basis corrected to 3 percent oxygen | 1 hr minimum sampling time. |
| | b. Dioxins/Furans | 0.003 ng/dscm (TEQ) corrected to 7 percent oxygen | Collect a minimum of 4 dscm per run. |
| 5. Stokers designed to burn coal/solid fossil fuel | a. CO | 7 ppm by volume on a dry basis corrected to 3 percent oxygen | 1 hr minimum sampling time. |

| If your boiler or process heater is in this subcategory | For the following pollutants | The emissions must not exceed the following emission limits, except during periods of startup and shutdown | Using this specified sampling volume or test run duration |
|---|---|---|---|
| | b. Dioxins/Furans | 0.003 ng/dscm (TEQ) corrected to 7 percent oxygen | Collect a minimum of 4 dscm per run. |
| 6. Fluidized bed units designed to burn coal/solid fossil fuel | a. CO | 30 ppm by volume on a dry basis corrected to 3 percent oxygen | 1 hr minimum sampling time. |
| | b. Dioxins/Furans | 0.002 ng/dscm (TEQ) corrected to 7 percent oxygen | Collect a minimum of 4 dscm per run. |
| 7. Stokers designed to burn biomass/bio-based solids | a. CO | 560 ppm by volume on a dry basis corrected to 3 percent oxygen | 1 hr minimum sampling time. |
| | b. Dioxins/Furans | 0.005 ng/dscm (TEQ) corrected to 7 percent oxygen | Collect a minimum of 4 dscm per run. |
| 8. Fluidized bed units designed to burn biomass/bio-based solids | a. CO | 260 ppm by volume on a dry basis corrected to 3 percent oxygen | 1 hr minimum sampling time. |
| | b. Dioxins/Furans | 0.02 ng/dscm (TEQ) corrected to 7 percent oxygen | Collect a minimum of 4 dscm per run. |
| 9. Suspension burners/Dutch Ovens designed to burn biomass/bio-based solids | a. CO | 1,010 ppm by volume on a dry basis corrected to 3 percent oxygen | 1 hr minimum sampling time. |
| | b. Dioxins/Furans | 0.2 ng/dscm (TEQ) corrected to 7 percent oxygen | Collect a minimum of 4 dscm per run. |
| 10. Fuel cells designed to burn biomass/bio-based solids | a. CO | 470 ppm by volume on a dry basis corrected to 3 percent oxygen | 1 hr minimum sampling time. |
| | b. Dioxins/Furans | 0.003 ng/dscm (TEQ) corrected to 7 percent oxygen | Collect a minimum of 4 dscm per run. |
| 11. Hybrid suspension/grate units designed to burn biomass/bio-based solids | a. CO | 1,500 ppm by volume on a dry basis corrected to 3 percent oxygen | 1 hr minimum sampling time. |
| | b. Dioxins/Furans | 0.2 ng/dscm (TEQ) corrected to 7 percent oxygen | Collect a minimum of 4 dscm per run. |
| 12. Units designed to burn liquid fuel | a. Particulate Matter | 0.002 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr) | Collect a minimum of 2 dscm per run. |
| | b. Hydrogen Chloride | 0.0032 lb per MMBtu of heat input | For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run. |

| If your boiler or process heater is in this subcategory | For the following pollutants | The emissions must not exceed the following emission limits, except during periods of startup and shutdown | Using this specified sampling volume or test run duration |
|---|---|---|---|
| | c. Mercury | 3.0E-07 lb per MMBtu of heat input | For M29, collect a minimum of 2 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [a]collect a minimum of 2 dscm. |
| | d. CO | 3 ppm by volume on a dry basis corrected to 3 percent oxygen | 1 hr minimum sampling time. |
| | e. Dioxins/Furans | 0.002 ng/dscm (TEQ) corrected to 7 percent oxygen | Collect a minimum of 4 dscm per run. |
| 13. Units designed to burn liquid fuel located in non-continental States and territories | a. Particulate Matter | 0.002 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr) | Collect a minimum of 2 dscm per run. |
| | b. Hydrogen Chloride | 0.0032 lb per MMBtu of heat input | For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run. |
| | c. Mercury | 7.8E-07 lb per MMBtu of heat input | For M29, collect a minimum of 1 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [a]collect a minimum of 2 dscm. |
| | d. CO | 51 ppm by volume on a dry basis corrected to 3 percent oxygen | 1 hr minimum sampling time. |
| | e. Dioxins/Furans | 0.002 ng/dscm (TEQ) corrected to 7 percent oxygen | Collect a minimum of 4 dscm per run. |
| 14. Units designed to burn gas 2 (other) gases | a. Particulate Matter | 0.0067 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr) | Collect a minimum of 1 dscm per run. |
| | b. Hydrogen Chloride | 0.0017 lb per MMBtu of heat input | For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run. |
| | c. Mercury | 7.9E-06 lb per MMBtu of heat input | For M29, collect a minimum of 1 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [a]collect a minimum of 2 dscm. |

| If your boiler or process heater is in this subcategory | For the following pollutants | The emissions must not exceed the following emission limits, except during periods of startup and shutdown | Using this specified sampling volume or test run duration |
|---|---|---|---|
| | d. CO | 3 ppm by volume on a dry basis corrected to 3 percent oxygen | 1 hr minimum sampling time. |
| | e. Dioxins/Furans | 0.08 ng/dscm (TEQ) corrected to 7 percent oxygen | Collect a minimum of 4 dscm per run. |

[a] Incorporated by reference, see § 63.14.

[76 FR 15664, Mar. 21, 2011]

EDITORIAL NOTE: At 78 FR 7208, Jan. 31, 2013, Table 12 was added, effective Apr. 1, 2013. However, Table 12 could not be added as a Table 12 is already in existence.

**Table 13 to Subpart DDDDD of Part 63—Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After December 23, 2011, and Before January 31, 2013**

| If your boiler or process heater is in this subcategory . . . | For the following pollutants . . . | The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . . | Using this specified sampling volume or test run duration . . . |
|---|---|---|---|
| 1. Units in all subcategories designed to burn solid fuel | a. HCl | 0.022 lb per MMBtu of heat input | For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run. |
| | b. Mercury | 8.6E-07 [a]lb per MMBtu of heat input | For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 4 dscm. |
| 2. Pulverized coal boilers designed to burn coal/solid fossil fuel | a. Carbon monoxide (CO) (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 1.1E-03 lb per MMBtu of heat input; or (2.8E-05 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 3. Stokers designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.8E-02 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |

| If your boiler or process heater is in this subcategory . . . | For the following pollutants . . . | The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . . | Using this specified sampling volume or test run duration . . . |
|---|---|---|---|
| 4. Fluidized bed units designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 5. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel | a. CO (or CEMS) | 140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 6. Stokers/sloped grate/others designed to burn wet biomass fuel | a. CO (or CEMS) | 620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (410 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 7. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel | a. CO | 460 ppm by volume on a dry basis corrected to 3 percent oxygen | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 3.2E-01 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 8. Fluidized bed units designed to burn biomass/bio-based solids | a. CO (or CEMS) | 230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 9.8E-03 lb per MMBtu of heat input; or (8.3E-05 [a]lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 9. Suspension burners designed to burn biomass/bio-based solids | a. CO (or CEMS) | 2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 5.1E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 10. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids | a. CO (or CEMS) | 810 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average) | 1 hr minimum sampling time. |

| If your boiler or process heater is in this subcategory . . . | For the following pollutants . . . | The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . . | Using this specified sampling volume or test run duration . . . |
|---|---|---|---|
| | b. Filterable PM (or TSM) | 3.6E-02 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 11. Fuel cell units designed to burn biomass/bio-based solids | a. CO | 910 ppm by volume on a dry basis corrected to 3 percent oxygen | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.0E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 12. Hybrid suspension grate boiler designed to burn biomass/bio-based solids | a. CO (or CEMS) | 1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 13. Units designed to burn liquid fuel | a. HCl | 1.2E-03 lb per MMBtu of heat input | For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run. |
| | b. Mercury | 4.9E-07 [a]lb per MMBtu of heat input | For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 4 dscm. |
| 14. Units designed to burn heavy liquid fuel | a. CO (or CEMS) | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (18 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 1.3E-03 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 15. Units designed to burn light liquid fuel | a. CO (or CEMS) | 130 [a]ppm by volume on a dry basis corrected to 3 percent oxygen; or (60 ppm by volume on a dry basis corrected to 3 percent oxygen, 1-day block average). | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 1.1E-03 [a]lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |
| 16. Units designed to burn liquid fuel that are non-continental units | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test; or (91 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-hour rolling average) | 1 hr minimum sampling time. |
| | b. Filterable PM (or TSM) | 2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input) | Collect a minimum of 2 dscm per run. |
| 17. Units designed to burn gas 2 (other) gases | a. CO | 130 ppm by volume on a dry basis corrected to 3 percent oxygen | 1 hr minimum sampling time. |

| If your boiler or process heater is in this subcategory . . . | For the following pollutants . . . | The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . . | Using this specified sampling volume or test run duration . . . |
|---|---|---|---|
| | b. HCl | 1.7E-03 lb per MMBtu of heat input | For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run. |
| | c. Mercury | 7.9E-06 lb per MMBtu of heat input | For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 3 dscm. |
| | d. Filterable PM (or TSM) | 6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input) | Collect a minimum of 3 dscm per run. |

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit and you are not required to conduct testing for CEMS or CPMS monitor certification, you can skip testing according to § 63.7515 if all of the other provision of § 63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[78 FR 7210, Jan. 31, 2013]

# Indiana Department of Environmental Management
# Office of Air Quality

## Technical Support Document (TSD) for a Part 70 Significant Source and Significant Permit Modification

**Source Description and Location**

| | |
|---|---|
| Source Name: | MGPI of Indiana, LLC |
| Source Location: | 7 Ridge Avenue, Lawrenceburg, IN 47025 |
| County: | Dearborn |
| SIC Code: | 2085 |
| Operation Permit No.: | T 029-32119-00005 |
| Operation Permit Issuance Date: | June 20, 2014 |
| Significant Source Modification No.: | 029-35496-00005 |
| Significant Permit Modification No.: | 029-35505-00005 |
| Permit Reviewer: | Kristen Willoughby |

**Source Definition**

Proximo Distillers Indiana, LLC owns a bottling plant (source ID # 029-00043) that was previously part of the same permit as the MGPI of Indiana, LLC distillery (source ID #029-00005). Some of the MGPI plant's production is bottled at the Proximo plant. IDEM, OAQ has examined whether these two plants are part of the same major source. The term "major source" is defined at 326 IAC 2-7-1(22). In order for these plants to be considered one major source, they must meet all three of the following criteria:

(1) the plants must be under common ownership or common control;

(2) the plants must have the same two-digit Standard Industrial Classification (SIC) Code or one must serve as a support facility for the other; and,

(3) the plants must be located on contiguous or adjacent properties.

The plants have separate ownership. MGPI of Indiana, LLC and Proximo Distillers Indiana, LLC are distinct corporations. There are no common controllers, common corporate officers or common directors between the two companies. The corporations are not subsidiaries of any common corporate parent or other common owner. Therefore no common ownership exists.

Where there is no common ownership, IDEM's Nonrule Policy Document Air-005 sets out two independent tests to determine if common control exists. The first test, the auxiliary activity test, determines whether one source performs an auxiliary activity which directly serves the purpose of the primary activity and whether the owner or operator of the primary activity has a major role in the day-to-day operations of the auxiliary activity. An auxiliary activity directly serves the purpose of a primary activity by supplying a necessary raw material to the primary activity or performing an integral part of the production process for the primary activity.

Day-to-day control of the auxiliary activity by the primary activity may be evidenced by several factors, including:

- is a majority of the output of the auxiliary activity provided to the primary activity?

- can the auxiliary activity contract to provide it products/services to a third-party without the consent of the primary activity?

- can the primary activity assume control of the auxiliary activity under certain circumstances?

- is the auxiliary activity required to complete periodic reports to the primary activity?

If one or a combination of these questions is answered affirmatively, common control may exist.

The MGPI plant sends about 10% of its output to the Proximo plant for bottling. A pipeline from the MGPI plant sends the alcohol directly to the Proximo plant. The remainder of the MGPI plant's production is shipped out as bulk spirits. The Proximo plant is free to bottle spirits from other distilleries. The MGPI plant has no ability to assume control of the Proximo plant under any circumstances. The Proximo plant is not required to complete periodic reports to the MGPI plant. The Proximo plant does not send any output to the MGPI plant. More than 50% of the Proximo plant's bottling is done from alcohol it receives from other distilleries. The plants do not meet the first common control test.

The second common control test in the nonrule policy is the but/for test. This test focuses on whether the auxiliary activity would exist absent the needs of the primary activity. If all or a majority of the output of the auxiliary activity is consumed by the primary activity the but/for test is satisfied. Only 10% of the MGPI plant's output is bottled at the Proximo plant. Of all the bottling done at the Proximo plant, less than 50% is done from alcohol received from the MGPI plant. Therefore the second common control test is also not met. IDEM finds that the MGPI plant and the Proximo plant are not under common control. Since neither common ownership nor common control exists, the first part of the definition of major source is not met.

The Standard Industrial Classification Code Manual of 1987 sets out how to determine the proper SIC Code for each type of business. More information about SIC Codes is available at http://www.osha.gov/pls/imis/sic_manual.html on the Internet. The SIC Code is determined by looking at the principal product or activity of each plant. The MGPI plant has the two-digit SIC Code 20 for the Major Group Food and Kindred Products, which includes the four-digit SIC Code 2085 for Distilled and Blended Liquors. The Proximo plant has the two-digit SIC Code 51 for the Major Group Wholesale Trade – Nondurable Goods. The Proximo plant has the four-digit SIC Code 5182 Wine and Distilled Alcoholic Beverages, which includes plants that bottle alcohol.

A plant is a support facility to another plant if it dedicates 50% or more of its output to the other plant. The MGPI plant sends about 10% of its output to the Proximo plant. The Proximo plant sends nothing to the MGPI plant. The Proximo plant does less than 50% of its bottling work using alcohol received from the MGPI plant. Since neither plant dedicates 50% or more of its output to the other plant, there is no support facility relationship. Since the plants do not have the same two-digit SIC Code or a support relationship, the second part of the major source definition is not met.

The last part of the definition is whether the plants are on contiguous or adjacent properties. The plants are located on contiguous properties that are separated only by a right-of-way for an Indiana state highway. The property boundaries of the plants share a common border under the right-of-way. Since the plants are located on contiguous properties, they meet the third element of the major source definition.

IDEM, OAQ finds that the MGPI plant and the Proximo plant do not meet all three parts of the major source definition and therefore the two plants are not part of the same major source.

## Existing Approvals

The source was issued Part 70 Operating Permit No. T029-32119-00005 on June 20, 2014. There have been no subsequent approvals issued.

## County Attainment Status

The source is located in Dearborn County.

| Pollutant | Designation |
|---|---|
| $SO_2$ | Cannot be classified. |
| CO | Unclassifiable or attainment effective November 15, 1990. |
| $O_3$ | Nonattainment effective July 20, 2012, for the 2008 8-hour ozone standard for Lawrenceburg Township. Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard for the remainder of the county.[1] |
| $PM_{2.5}$ | Attainment effective December 23, 2011, for the annual PM2.5 standard for Lawrenceburg Township. Unclassifiable or attainment effective April 5, 2005, for the annual PM2.5 standard for the remainder of the county. |
| $PM_{2.5}$ | Unclassifiable or attainment effective December 13, 2009, for the 24-hour $PM_{2.5}$ standard. |
| $PM_{10}$ | Unclassifiable effective November 15, 1990. |
| $NO_2$ | Cannot be classified or better than national standards. |
| Pb | Unclassifiable or attainment effective December 31, 2011. |
| [1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. | |

(a) Ozone Standards
U.S. EPA, in the Federal Register Notice 77 FR 112 dated June 11, 2012, has designated Dearborn County Lawrenceburg Township as nonattainment for ozone. On August 1, 2012, the air pollution control board issued an emergency rule adopting the U.S. EPA's designation. This rule became effective August 9, 2012. IDEM does not agree with U.S. EPA's designation of nonattainment. IDEM filed a suit against U.S. EPA in the U.S. Court of Appeals for the DC Circuit on July 19, 2012. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's designation. Volatile organic compounds (VOC) and Nitrogen Oxides ($NO_x$) 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 $NO_x$ emissions are considered when evaluating the rule applicability relating to ozone. Therefore, VOC and $NO_x$ emissions were evaluated pursuant to the requirements of Emission Offset, 326 IAC 2-3.

(b) $PM_{2.5}$
Dearborn County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, $SO_2$, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Other Criteria Pollutants
Dearborn County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

## Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

The proposed source includes boilers which support the distilled spirits production source with a total heat input rating of greater than 250 million British thermal units per hour (MMBtu/hr).

The boilers with a total heat input rating of greater than 250 MMBtu/hr are considered one of the 28 listed source categories, based on the EPA guidance for "nesting activities". Therefore, any fugitive emissions from these boilers are counted toward PSD applicability.

**Source Status - Existing Source**

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

| **Entire Source** | |
|---|---|
| **Pollutant** | **Emissions** (ton/yr) |
| PM | >250 |
| $PM_{10}$ | >250 |
| $PM_{2.5}$ | >250 |
| $SO_2$ | <100 |
| $NO_X$ | >250 |
| VOC | >250 |
| CO | >100 |
| Single HAP | >10 |
| Total HAPs | >25 |

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf ) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHGs emissions to determine operating permit applicability or PSD applicability to a source or modification.

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a PSD regulated pollutant, excluding GHGs, is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is a major stationary source, under Emission Offset (326 IAC 2-3), because VOC, a nonattainment regulated pollutant, is emitted at a rate of 100 tons per year or more.

(c) These emissions are based upon the Technical Support Document for Title V Operating Permit Renewal No. T029-32119-00005.

(d) This existing source is a major source of HAPs, as defined in 40 CFR 63.2, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

## Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by MGPI of Indiana, LLC on February 23, 2014, relating to the installation of a new DDG dryer and wet cake storage pad. The application also included modifications to the existing cooler and transport system (EU-32).s The following is a list of the proposed emission units and pollution control device(s):

(a) One (1) DDG dryer operation, approved in 2015 for construction, identified as EU-39, with emission controlled by four (4) cyclones (CE-39a) and an 8 MMBtu/hr RTO (CE-39b), exhausting to stack S-320, and consisting of the following:

(1) One (1) DDG Dryer, with a maximum heat input of 45 MMBtu/hr and a maximum throughput of 9.56 tons/hr DDG.

(2) One (1) screw K-valve, identified as Screw #1 K-Valve.

(3) Three (3) enclosed feed conveyors, identified as #11 - #13.

(4) One (1) agitator mixer and inlet screw.

(e) One (1) box screw, approved in 2015 for construction, identified as Drop Box Screw. All emissions from this unit are routed to the existing cooler and transport system (EU-32) and controlled by a cyclone, exhausting to Stack S- 310.

(f) One (1) drag conveyor, approved in 2015 for construction. All emissions from this unit are routed to the existing cooler and transport system (EU-32) and controlled by a cyclone, exhausting to Stack S- 310.

(g) One (1) recycle screw, approved in 2015 for construction. All emissions from this unit are routed to the existing cooler and transport system (EU-32) and controlled by a cyclone, exhausting to Stack S- 310.

(h) One (1) K-Valve, approved in 2015 for construction. All emissions from this unit are routed to the existing cooler and transport system (EU-32) and controlled by a cyclone, exhausting to Stack S- 310.

(i) Three (3) product conveyors, approved in 2015 for construction, identified as #21 - #23. All emissions from these units are routed to the existing cooler and transport system (EU-32) and controlled by a cyclone, exhausting to Stack S- 310.

(j) One (1) wet cake storage pad, approved in 2015 for construction, identified as EU-40, with a maximum throughput of 24.56 tons per hour wet cake, with emissions uncontrolled.

## Enforcement Issues

There are no pending enforcement actions related to this modification.

## Stack Summary

| Stack ID | Operation | Height (ft) | Diameter (ft) | Flow Rate (acfm) | Temperature ($^0$F) |
|---|---|---|---|---|---|
| S-320 | EU-39 | 125 | TBD | 30,000 | 315 |

## Emission Calculations

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

## Permit Level Determination – Part 70 Modification to an Existing Source

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency."

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit. If the control equipment has been determined to be integral, the table reflects the PTE after consideration of the integral control device.

| **Increase in PTE Before Controls of the Modification** | |
|---|---|
| **Pollutant** | **Potential To Emit** (ton/yr) |
| PM | 421.32 |
| $PM_{10}$ | 420.19 |
| $PM_{2.5}$ | 419.01 |
| $SO_2$ | 18.84 |
| VOC | 419.66 |
| CO | 464.28 |
| $NO_X$ | 27.86 |
| Single HAPs | >10 |
| Total HAPs | >25 |

This source modification is subject to 326 IAC 2-7-10.5(g), modifications subject to 326IAC 8-1-6, modifications with a potential to emit greater than 25 tpy of PM, PM10, PM2.5, VOC, and NOx, modifications with a potential to emit greater than 100 tpy of CO, and modifications with a potential to emit greater than 10 tpy of a single HAP and 25 tpy total HAPs. Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d), because it does require case-by-case emission limitations.

## Permit Level Determination – PSD and Emission Offset

The Permittee has provided information as part of the application for this approval that, based on Actual to Projected Actual test in 326 IAC 2-2-2 and 2-3-2, this modification at a major stationary source will not be major for Prevention of Significant Deterioration under 326 IAC 2-2-1 and Emission Offset under 326 IAC 2-3-1. IDEM, OAQ has not reviewed this information and will not be making any determination in this regard as part of this approval. The applicant will be required to keep records and report in accordance with Source obligation in 326 IAC 2-2-8 and Applicability in 326 IAC 2-3-2.

| | **Project Emissions** (ton/yr) | | | | | | |
|---|---|---|---|---|---|---|---|
| **Process / Emission Unit** | **PM** | **$PM_{10}$** | **$PM_{2.5}$ *** | **$SO_2$** | **$NO_X$** | **VOC** | **CO** |
| *PTE (New Units)* | | | | | | | |
| DDG Dryer (EU-39) | 8.38 | 8.38 | 8.38 | 18.84 | 27.86 | 8.38 | 46.43 |
| Wet Pad (EU-40) | - | - | - | - | - | 0.89 | - |
| Total New Units | 8.38 | 8.38 | 8.38 | 18.84 | 27.86 | 9.27 | 46.43 |
| *Actual to Potential (DDG Cooler and Transport System EU-32)* | | | | | | | |
| Baseline | 0 | 0 | 0 | - | - | 0 | - |
| PTE | 7.91 | 5.01 | 2.01 | - | - | 9.16 | - |
| Emissions Increase | 7.91 | 5.01 | 2.01 | - | - | 9.16 | - |
| *ATPA (Rotary Dryers EU-32)* | | | | | | | |
| Baseline | 21.45 | 21.45 | 21.45 | - | - | 635.51 | - |
| Projected Actuals | 19.85 | 19.85 | 19.85 | - | - | 587.94 | - |
| Emissions Increase | 0.00 | 0.00 | 0.00 | - | - | 0.00 | - |
| **Hybrid Test Emissions Increase** | **16.29** | **13.38** | **10.39** | **18.84** | **27.86** | **18.42** | **46.43** |
| Significant Thresholds - PSD | 25 | 15 | 10 | 40 | 40 | NA | 100 |
| Significant Thresholds - EO | NA | NA | NA | NA | 40 | 40 | NA |

*$PM_{2.5}$ listed is direct $PM_{2.5}$.

The emissions increase for PM2.5 is above the applicable Significant threshold. Therefore, netting is triggered for PM2.5.

| **Net Emissions** (ton/yr) | |
|---|---|
| | **$PM_{2.5}$*** |
| Emissions Increase for Modification (Hybrid Test Emissions Increase from Project Emissions Table above) | **10.39** |
| Contemporaneous Increase | 0.41 |
| Contemporaneous Decrease | -2.02 |
| Net Emissions Increase for Modification | 8.78 |
| PSD Significant Thresholds | 10 |

*$PM_{2.5}$ listed is direct $PM_{2.5}$.

See calculations for a detailed analysis of the contemporaneous netting.

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf ) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases

(GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHGs emissions to determine operating permit applicability or PSD applicability to a source or modification.

This modification to an existing major PSD stationary source is not major because:

(a) The emissions increase of PSD regulated pollutants PM, $PM_{10}$, $SO_2$, NOx, and CO, are less than the PSD significant thresholds.

(b) The net emissions increase of the PSD regulated pollutant $PM_{2.5}$ is less than the PSD significant threshold.

Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Since this source is considered a major PSD source and the unrestricted potential to emit of this modification is greater than twenty-five (25) tons of PM per year, fifteen (15) tons of $PM_{10}$ per year, ten (10) tons of direct $PM_{2.5}$ per year, and one hundred (100) tons of CO per year, this source has elected to limit the potential to emit of this modification as follows:

(a) The total dryer feed rate for the Rotary Dryers (EU-32) shall not exceed 147,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The PM2.5 emissions from the Rotary Dryers (EU-32) shall not exceed 0.27 lb/ton.

(c) The PM emissions from the Transport System (EU-32) shall not exceed 1.22 lbs/hr.

(d) The PM10 emissions from the Transport System (EU-32) shall not exceed 0.82 lbs/hr.

(e) The PM2.5 emissions from the Transport System (EU-32) shall not exceed 0.40 lbs/hr.

(f) The PM emissions from the DDG Dryer Operation (EU-39) shall not exceed 1.91 lbs/hr.

(g) The PM10 emissions from the DDG Dryer Operation (EU-39) shall not exceed 1.91 lbs/hr.

(h) The PM2.5 emissions from the DDG Dryer Operation (EU-39) shall not exceed 1.91 lbs/hr.

(i) The CO emissions from the DDG Dryer Operation (EU-39) shall not exceed 10.60 lbs/hr.

Compliance with these limits in conjunction with the potential to emit from the rest of the modification, will ensure that the emissions increase from this modification is less than twenty-five (25) tons of PM per year, fifteen (15) tons of $PM_{10}$ per year, one hundred (100) tons of CO per year, and therefore will render the requirements of 326 IAC 2-2 (PSD) not applicable.

Compliance with these limits will ensure the net emissions increase from Significant Source Modification No. 029-35496-00005 is less than ten (10) tons of direct $PM_{2.5}$ per year, and therefore, will render the requirements of 326 IAC 2-2 (PSD) not applicable.

This modification to an existing major Emission Offset stationary source is not major because the emissions increase of NOx and VOC are less than the Emission Offset significant thresholds. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply

Since this source is considered a major Emission Offset source and the unrestricted potential to emit of this modification is greater than forty (40) tons of VOC per year, this source has elected to limit the potential to emit of this modification as follows:

(a) The VOC emissions from the DDG Dryer Operation (EU-39) shall not exceed 8.90 lbs/hr.

Compliance with this limit in conjunction with the potential to emit from the rest of the modification, will ensure that the potential to emit from this modification is less than forty (40) tons of VOC per year, and therefore will render the requirements of 326 IAC 2-3 (Emission Offset) not applicable.

## Federal Rule Applicability Determination

The following federal rules are applicable to the source due to this modification:

**NSPS:**

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed DDG Dryer Operation (EU-39).

**NESHAP:**

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) applicable to this proposed DDG Dryer Operation (EU-39).

**CAM:**

(d) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each new or modified emission unit involved:

| CAM Applicability Analysis for the DDG Dryer (EU-39) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Pollutant** | **Control Device Used** | **Emission Limitation** (Y/N) | **Uncontrolled PTE** (ton/yr) | **Controlled PTE** (ton/yr) | **Part 70 Major Source Threshold** (ton/yr) | **CAM Applicable** (Y/N) | **Large Unit** (Y/N) |
| PM | cyclone | 326 IAC 6.5 | >100 | <100 | 100 | Y | N |
| PM10 | cyclone | 326 IAC 2-2 | >100 | <100 | 100 | Y | N |

| CAM Applicability Analysis for the DDG Dryer (EU-39) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Pollutant** | **Control Device Used** | **Emission Limitation** (Y/N) | **Uncontrolled PTE** (ton/yr) | **Controlled PTE** (ton/yr) | **Part 70 Major Source Threshold** (ton/yr) | **CAM Applicable** (Y/N) | **Large Unit** (Y/N) |
| PM2.5 | cyclone | 326 IAC 2-2 | >100 | <100 | 100 | Y | N |
| SO2 | none | NA | NA | NA | NA | N | NA |
| NOx | none | NA | NA | NA | NA | N | NA |
| VOC | RTO | 326 IAC 8-1-6 | >100 | <100 | 100 | Y | N |
| CO | RTO | 326 IAC 2-2 | >100 | <100 | 100 | Y | N |
| Acetaldehyde | RTO | 326 IAC 2-4.1 | >10 | <10 | 10 | Y | N |

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the DDG dryer (EU-39) for PM, PM10, PM2.5, VOC, CO, and Acetaldhyde upon issuance of the Title V Renewal. A CAM plan must be submitted as part of the Renewal application.

| CAM Applicability Analysis for the Rotary Dryers and Transport System (EU-32) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Pollutant** | **Control Device Used** | **Emission Limitation** (Y/N) | **Uncontrolled PTE** (ton/yr) | **Controlled PTE** (ton/yr) | **Part 70 Major Source Threshold** (ton/yr) | **CAM Applicable** (Y/N) | **Large Unit** (Y/N) |
| Rotary Dryers - PM10 | Wet Scrubber | 326 IAC 2-2 | >100 | <100 | 100 | Y | N |
| Rotary Dryers - PM2.5 | Wet Scrubber | 326 IAC 2-2 | >100 | <100 | 100 | Y | N |
| Transport System - PM10 | Cyclone | 326 IAC 2-2 | <100 | NA | 100 | N | N |
| Transport System - PM2.5 | Cyclone | 326 IAC 2-2 | <100 | NA | 100 | N | N |

Note - These are existing/modified units that have new limits as part of this modification. Only the new limits were evaluated for CAM.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the Rotary Dryers (EU-32) for PM10 and PM2.5 upon issuance of the Title V Renewal. A CAM plan must be submitted as part of the Renewal application.

## State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

**326 IAC 2-2 and 2-3 (PSD and Emission Offset)**
PSD and Emission Offset applicability is discussed under the Permit Level Determination – PSD and Emission Offset section.

**326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))**
The source has chosen to take the following emission limitstion to limit the operation of the DDG Dryer (EU-39) so that it will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs.

(a) The Acetaldehyde emissions from the DDG Dryer Operation (EU-39) shall not exceed 1.91 lbs/hr.

(b) The Formaldehyde emissions from the DDG Dryer Operation (EU-39) shall not exceed 1.48 lbs/hr.

Compliance with these emission limits will ensure that the potential to emit from this modification is less than ten (10) tons of single HAP per year, less than twenty-five (25) tons of total HAP per year, and therefore will render the requirements of 326 IAC 2-4.1 does not apply.

**326 IAC 6.5 (PM Limitations Except Lake County)**
This source is subject to 326 IAC 6.5 because it is located in Dearborn County, its PM PTE (or limited PM PTE) is equal to or greater than 100 tons/year or actual emissions are greater than 10 tons/year. However, this source is not one of the sources specifically listed in 326 IAC 6.5-2 through 326 IAC 6.5-10. Therefore, 326 IAC 6.5-1-2(a) applies.

**326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)**
Pursuant to 326 IAC 6-3-1(c)(3), since the DDG Dryer Operation (EU-39) and the transport system (EU-32) are subject to a more stringent limitation under 326 IAC 6.5, the requirements of 326 IAC 6-3-2 do not apply..

**326 IAC 7 (Sulfur Dioxide Rules)**
The potential to emit of SO2 from the DDG Dryer Operation is less than 25 tons per year and 10 pounds per hour. Therefore, the requirements of 326 IAAC7-1.1 do not apply.

**326 IAC 8-1-6 (BACT)**
In order to comply with the requirements of 326 IAC 8-1-6 (BACT), the source shall comply with the following:

(a) The VOC emissions from the DDG dryer (EU-39) shall be controlled by an RTO.

(b) The RTO shall operate with an overall control efficiency, which includes capture and destruction efficiencies, of not less than 98%.

(c) The VOC emissions from the DDG dryer (EU-39) shall not exceed 1.91 lb/hr.

The detailed BACT analysis is included as Appendix C to this Technical Support Document.

**326 IAC 9 (Carbon Monoxide Emission Rules)**
The DDG Dryer Operation is commencing operation after March 21, 1972, however, it is not subject to an emission limit established under 326 IAC 9-1-2. Therefore, it is not subject to the requirements of 326 IAC 9-1-2.

## Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure 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.

The Compliance Determination Requirements applicable to this modification are as follows:

(a) EU-32 and EU-39 have applicable compliance determination conditions as specified below:

(1) Particulate, VOC, CO, and HAP Control

(A) The RTO for VOC, CO, and HAP control shall be in operation and control emissions from the DDG Dryer EU-39 at all times the facility is in operation.

(B) The wet scrubbers and cyclones for particulate control shall be in operation and control emissions from the Rotary Dryers and DDG Cooler and Transport System collectively identified as EU-32 and the DDG Dryer EU-39 at all times the facilities are in operation.

(2) Testing

| **Summary of Testing Requirements** | | | | | |
|---|---|---|---|---|---|
| **Emission Unit** | **Control Device** | **Timeframe for Testing** | **Pollutant** | **Frequency of Testing** | **Limit or Requirement** |
| EU-39 | Cyclone & RTO | 180 days | PM, PM10, PM2.5, CO, and VOC | Once every 5 years | 98% overall VOC control, 1.91 lb/hr VOC, 1.91 lb/hr PM/PM10/PM2.5, 10.60 lb/hr CO |
| EU-32 (Transport System) | Cyclone | 180 days | PM, PM10, PM2.5 | Once every 5 years | 1.05 lb/hr PM, 0.69 lb/hr PM10, 0.31 lb/hr PM2.5 (combined) |

The compliance monitoring requirements applicable to this modification are as follows:

(b) EU-32 and EU-39 have applicable compliance monitoring conditions as specified below:

| **Control** | **Parameter** | **Frequency** | **Range** | **Excursions and Exceedances** |
|---|---|---|---|---|
| Transport System (EU-32) Cyclone & Cyclone (CE-39a) | Visible Emissions | Daily | Normal-Abnormal | Response Steps |
| Rotary Dryer (EU-32) Wet Scrubbers #1 and #2 | Water Pressure Drop | Daily | 0.5 to 6.5 inches | Response Steps |
| | Flow Rate | | at or above 4 gpm at nozzle and 10 gpm at trays | |
| Rotary Dryer (EU-32) Wet Scrubbers #3 - #5 | Water Pressure Drop | Daily | 0.5 to 6.5 inches | Response Steps |
| | Flow Rate | | at or above 3 gpm at nozzle and 7 gpm at trays | |
| RTO (CE-39b) | Temperature | Continuous | at or above 1400$^{o}$F | Response Steps |

| Control | Parameter | Frequency | Range | Excursions and Exceedances |
|---|---|---|---|---|
| | Duct Pressure / Fan Amperage | Daily | latest stack test | |

These monitoring conditions are necessary because the cyclones, wet scrubbers, and RTO must operate properly to ensure compliance with 326 IAC 6.5 (Particulate Matter Limitations Except Lake County), 326 IAC 8-1-6 (BACT), 326 IAC 2-2 (PSD), 326 IAC 2-4.1 (HAPs), and 326 IAC 2-7 (Part 70)).

**Proposed Changes**

The changes listed below have been made to Part 70 Operating Permit No. T029-32119-00005. These changes may include Title I changes (ex changes that add or modify synthetic minor emission limits). Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

**Summary of Model Updates Throughout the Permit**

(a) On November 3, 2011, the Indiana Air Pollution Control Board issued a revision to 326 IAC 2. The revision resulted in a change to the rule citations of the “responsible official”, "trivial activity", "section 502(b)(10) changes", and "regulated pollutant, which is used only for purposes of section 19 of this rule" definitions.

(b) Effective July 20, 2012 Dearborn County Lawrenceburg Township was designated non-attainment for the ozone standard. Conditions A.1 and C.18 have been updated.

**Summary of Updates Specific to this Modification for Section A**

(a) Condition A.2 and Section D.1 Facility Description Box was updated to reflect the new and modified units and update descriptive information to existing units.

The permit has been revised as follows:

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 distilled spirits production source.

| | |
|---|---|
| Source Address: | 7 Ridge Avenue, Lawrenceburg, Indiana 47025 |
| General Source Phone Number: | 812-496-0013 |
| SIC Code: | 2085 |
| County Location: | Dearborn |
| Source Location Status: | Nonattainment under the 8-hour ozone standard<br>Attainment for all other criteria pollutants |
| Source Status: | Part 70 Operating Permit Program<br>Major Source, under PSD **and Emission Offset** Rules<br>Major Source, Section 112 of the Clean Air Act<br>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:

***

(n) Five (5) rotary dryers, one (1) cooler and one (1) transport system, collectively identified as EU-32, installed prior to 1950, consisting of the following:

(1) Two (2) rotary dryers, exhausting to Stacks S-305 and S-306, each equipped with a wet scrubber, capacity: 25,500 pounds of grain per hour **inlet**, each,

(2) Three (3) rotary dryers, exhausting to Stacks S-307 through S-309, each controlled by a wet scrubber, capacity: 14,500 pounds of grain per hour **inlet**, each; and

(3) One (1) cooler ~~and~~**, with a maximum throughput of 9.56 tons of DDG per hour, with emissions uncontrolled.**

**(4)** **O**~~o~~ne (1) transport system, **with a maximum throughput of 9.56 tons of DDG per hour, approved for modification in 2015,** controlled by a cyclone, exhausting to Stack S- 310, ~~capacity: 13,000 pounds of grain per hour.~~ **and consisting of the following:**

**(A) One (1) hammermill.**

**(B) Four (4) screw conveyors.**

**(C) Two (2) drag conveyors.**

**(D) Three (3) product conveyors.**

**(E) One (1) K-valve.**

***

**(q) One (1) DDG dryer operation, approved in 2015 for construction, identified as EU-39, with emission controlled by four (4) cyclones (CE-39a) and an 8 MMBtu/hr RTO (CE-39b), exhausting to stack S-320, and consisting of the following:**

**(1) One (1) DDG Dryer, with a maximum heat input of 45 MMBtu/hr and a maximum throughput of 9.56 tons/hr DDG.**

**(2) One (1) screw K-valve, identified as Screw #1 K-Valve.**

**(3) Three (3) enclosed feed conveyors, identified as #11 - #13.**

**(4) One (1) agitator mixer and inlet screw.**

**(r) One (1) wet cake storage pad, approved in 2015 for construction, identified as EU-40, with a maximum throughput of 24.56 tons per hour wet cake, with emissions uncontrolled.**

***

**Summary of Model Updates for B and C Conditions**

(a) New Condition C.1 was added to include the requirements for units subject to 326 IAC 6-3-2 with a process weight rate less than 100 pounds per hour.

(b) **Section C - General Reporting Requirements**
IDEM, OAQ has decided to clarify the Permittee's responsibility under CAM.

The permit has been revised as follows:

***

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(~~40~~**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).

***

**C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]**

**Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.**

***

C.~~17~~**18** General Reporting Requirements [326 IAC 2-7-5(3)(C)][326 IAC 2-1.1-11][326 IAC 2-2**][326 IAC 2-3**][40 CFR 64][326 IAC 3-8]

(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.

**On and after the date by which the Permittee must use monitoring that meets the requirements of 40 CFR Part 64 and 326 IAC 3-8, the Permittee shall submit CAM reports to the IDEM, OAQ.**

**A report for monitoring under 40 CFR Part 64 and 326 IAC 3-8 shall include, at a minimum, the information required under paragraph (a) of this condition and the following information, as applicable:**

**(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;**

**(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and**

**(3) A description of the actions taken to implement a QIP during the reporting period as specified in Section C-Response to Excursions or Exceedances. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.**

**The Permittee may combine the Quarterly Deviation and Compliance Monitoring Report and a report pursuant to 40 CFR 64 and 326 IAC 3-8.**

***

**Summary of Updates Specific to this Modification for Section D**

(a) Limits were added in new Conditions D.1.1, D.1.2, and D.1.3 to include the requirements for 326 IAC 8-1-6 (BACT) and to keep this modification minor under 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (HAPs). Associated compliance determination, monitoring, record keeping, reporting, and report forms were added.

(b) Condition D.1.5 was revised to remove the transport system that is now subject to 326 IAC 6.5 and to break out the rotary dryers and cooler into separate limits as they now have separate calculations.

(c) The requirements of 326 IAC 6.5 were added for the new units in new Condition D.1.6.

(d) IDEM, OAQ has decided it is unnecessary to include multiple parametric monitoring conditions for EU-12, and EU-34 through EU-36. Therefore, Conditions D.1.6 and D.1.7 have been removed.

The permit has been revised as follows:

SECTION D.1 FACILITY OPERATION CONDITIONS

Emission Unit Description: Grain Handling, Fermentation, and Distillation

***

(n) Five (5) rotary dryers, one (1) cooler and one (1) transport system, collectively identified as EU-32, installed prior to 1950, consisting of the following:

(1) Two (2) rotary dryers, exhausting to Stacks S-305 and S-306, each equipped with a wet scrubber, capacity: 25,500 pounds of grain per hour **inlet**, each,

(2) Three (3) rotary dryers, exhausting to Stacks S-307 through S-309, each controlled by a wet scrubber, capacity: 14,500 pounds of grain per hour **inlet**, each; and

(3) One (1) cooler ~~and~~**, with a maximum throughput of 9.56 tons of DDG per hour, with emissions uncontrolled.**

**(4)** **O**~~o~~ne (1) transport system, **with a maximum throughput of 9.56 tons of DDG per hour, approved for modification in 2015,** controlled by a cyclone, exhausting to Stack S- 310, ~~capacity: 13,000 pounds of grain per hour.~~ **and consisting of the following:**

**(A) One (1) hammermill.**

**(B) Four (4) screw conveyors.**

**(C) Two (2) drag conveyors.**

**(D) Three (3) product conveyors.**

**(E) One (1) K-valve.**

***

**(q) One (1) DDG dryer operation, approved in 2015 for construction, identified as EU-39, with emission controlled by four (4) cyclones (CE-39a) and an 8 MMBtu/hr RTO (CE-39b), exhausting to stack S-320, and consisting of the following:**

**(1) One (1) DDG Dryer, with a maximum heat input of 45 MMBtu/hr and a maximum throughput of 9.56 tons/hr DDG.**

**(2) One (1) screw K-valve, identified as Screw #1 K-Valve.**

**(3) Three (3) enclosed feed conveyors, identified as #11 - #13.**

**(4) One (1) agitator mixer and inlet screw.**

**(r) One (1) wet cake storage pad, approved in 2015 for construction, identified as EU-40, with a maximum throughput of 24.56 tons per hour wet cake, with emissions uncontrolled.**

***

**D.1.1 Volatile Organic Compounds (VOC) BACT Limits [326 IAC 8-1-6]**

**Pursuant to 326 IAC 8-1-6, the Permittee shall comply with the following Best Available Control Technology (BACT) requirements:**

**(a) The VOC emissions from the DDG dryer (EU-39) shall be controlled by an RTO.**

**(b) The RTO shall operate with an overall control efficiency, which includes capture and destruction efficiencies, of not less than 98%.**

**(c) The VOC emissions from the DDG dryer (EU-39) shall not exceed 1.91 lb/hr.**

**D.1.2 PSD Minor Limit [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 total dryer feed rate for the Rotary Dryers (EU-32) shall not exceed 147,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**

**(b) The PM2.5 emissions from the Rotary Dryers (EU-32) shall not exceed 0.27 lb/ton.**

**(c) The PM emissions from the Transport System (EU-32) shall not exceed 1.22 lbs/hr.**

**(d) The PM10 emissions from the Transport System (EU-32) shall not exceed 0.82 lbs/hr.**

**(e) The PM2.5 emissions from the Transport System (EU-32) shall not exceed 0.40 lbs/hr.**

**(f) The PM emissions from the DDG Dryer Operation (EU-39) shall not exceed 1.91 lbs/hr.**

**(g) The PM10 emissions from the DDG Dryer Operation (EU-39) shall not exceed 1.91 lbs/hr.**

**(h) The PM2.5 emissions from the DDG Dryer Operation (EU-39) shall not exceed 1.91 lbs/hr.**

**(i) The CO emissions from the DDG Dryer Operation (EU-39) shall not exceed 10.60 lbs/hr.**

**Compliance with these limits in conjunction with the potential to emit from the rest of the modification, will ensure that the emission increase from this modification is less than**

**twenty-five (25) tons of PM per year, fifteen (15) tons of $PM_{10}$ per year, one hundred (100) tons of CO per year, and therefore will render the requirements of 326 IAC 2-2 (PSD) not applicable.**

**Compliance with these limits will ensure the net emissions increase from Significant Source Modification No. 029-35496-00005 is less than ten (10) tons of direct $PM_{2.5}$ per year, and therefore, will render the requirements of 326 IAC 2-2 (PSD) not applicable.**

**D.1.3 Emission Offset Minor Limit [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:**

**The VOC emissions from the DDG Dryer Operation (EU-39) shall not exceed 8.90 lbs/hr.**

**Compliance with this limit, in conjunction with the potential to emit from the rest of the modification, will ensure that the potential to emit from this modification is less than forty (40) tons of VOC per year, and therefore will render the requirements of 326 IAC 2-3 (Emission Offset) not applicable.**

**D.1.4 HAP Minor Limit [326 IAC 2-4.1]**

**In order to render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants) not applicable, the Permittee shall comply with the following:**

**(a) The Acetaldehyde emissions from the DDG Dryer Operation (EU-39) shall not exceed 1.91 lbs/hr.**

**(b) The Formaldehyde emissions from the DDG Dryer Operation (EU-39) shall not exceed 1.48 lbs/hr.**

**Compliance with these emission limits, in conjunction with the potential to emit from the rest of the modification, will ensure that the potential to emit from Significant Source Modification No. 029-35496-00005 is less than ten (10) tons of single HAP per year and twenty-five (25) tons of total HAPs per year, and therefore will render the requirements of 326 IAC 2-4.1 not applicable.**

D.1.5 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following emission units and control devices shall not exceed the pounds per hour limitation when operating at the stated process weight rates calculated using the following equations:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

or

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

| **Emission Unit (baghouse)** | **Unit Description** | **Process weight rate (tons per hour)** | **Allowable particulate emission rate (pounds per hour)** |
|---|---|---|---|
| EU-11 | grain receiving and Pneumatic Conveyor | 28.0 | 38.2 |
| EU-12 | Corn receiving and storage system | 446 | 67.6 |
| EU-13 | Grain Storage Bins | 224 | 59.7 |
| EU-14 | Hammermills and hopper | 54.9 | 45.4 |
| EU-32 | Rotary dryers~~, cooler and transport system~~ | ~~53.8~~ **25.5** | ~~45.3~~ **35.9** |
| **EU-32** | **cooler** | **9.56** | **18.6** |
| EU-34 | Storage silos and surge hoppers | 21.0 | 31.5 |
| EU-35 | Air transport system and scale to rail car loading area | 7.00 | 15.1 |
| EU-36 | Air transport system and scale to the truck loading area | 7.00 | 15.1 |
| EU-37 | Rail Loading | 7.00 | 15.1 |
| EU-38 | Truck Loading | 7.00 | 15.1 |

***

**D.1.7 Particulate Matter (PM) [326 IAC 6.5-1-2]**

**Pursuant to 326 IAC 6.5-1-2 (a)(Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the Transport System (EU-32), DDG Dryer (EU-39), and the wet cake storage pad (EU-40) shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.**

***

D.1.~~4~~**9** Particulate**, VOC, CO, VOC, and HAP** Control ~~[326 IAC 2-7-6(6)]~~

**(a) In order to ensure compliance with Conditions D.1.1, D.1.2, D.1.3, and D.1.4 the RTO for VOC, CO, VOC and HAP control shall be in operation and control emissions from the DDG Dryer EU-39 at all times the facility is in operation.**

**(b) In order to ensure compliance with Conditions D.1.2 and D.1.7, the wet scrubbers and cyclones for particulate control shall be in operation and control emissions from the Rotary Dryers and Transport System collectively identified as EU-32 and the DDG Dryer EU-39 at all times the facilities are in operation.**

(~~a~~**c**) In order to ensure compliance with Condition**s** ~~D.1.1~~ **D.1.5 and D.1.6**, the baghouses for particulate control shall be in operation and control emissions from EU-12 and EU-34 through EU-36, at all times that the facilities are in operation.

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

~~(c) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit. Operations may continue only if the~~

~~event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).~~

~~Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, or dust traces.~~

**D.1.10 Testing Requirements [326 IAC 2-1.1-11]**

**(a) Not later than 180 days after the startup of DDG Dryer EU-39, the Permittee shall perform PM, PM10, PM2.5, CO, and VOC testing of the DDG Dryer EU-39 utilizing methods approved by the commissioner at least once every 5 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. PM10 and PM2.5 includes filterable and condensable PM.**

**(b) Not later than 180 days after the startup of DDG Dryer EU-39, the Permittee shall perform PM, PM10, and PM2.5 testing of the Transport System EU-32 utilizing methods approved by the commissioner at least once every 5 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. PM10 and PM2.5 includes filterable and condensable PM.**

***

~~D.1.6 Parametric Monitoring [40 CFR 64]~~

~~The Permittee shall record the pressure drop across the baghouses used in conjunction with EU-12, at least once per day when this process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range, the Permittee shall take reasonable response. The normal range for this unit is a pressure drop between 0.5 and 5.5 inches of water unless a different upper-bound or lower bound value for this range 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 pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.~~

~~The instrument 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 at least once annually or as established by the manufacturer's specifications whichever is more frequent.~~

~~D.1.7 Baghouse Parametric Monitoring~~

~~The Permittee shall record the pressure drop across the baghouses used in conjunction with EU-34 through EU-36, at least once per day when this process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range, the Permittee shall take reasonable response. The normal range for these units is a pressure drop between 0.5 and 5.5 inches of water unless a different upper-bound or lower bound value for this range 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 pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.~~

~~The instrument 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~~

~~at least once annually or as established by the manufacturer's specifications whichever is more frequent.~~

**D.1.12 Visible Emissions Notations**

**(a) Visible emission notations of the Transport System cyclone stack exhausts (S-310) and the cyclones (CE-39a) stack exhausts (S-320) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.**

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

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

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

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

**D.1.13 Scrubber Flow Rate**

**(a) The Permittee shall monitor and record the flow rate of the scrubbers controlling the Rotary Dryers (EU-32) at least once per day when the associated processes are in operation. The Permittee shall maintain the flow rate at or above the minimum specified in the table below.**

| Parameter | Scrubber #1 S-305 | Scrubber #2 S-306 | Scrubber #3 S-307 | Scrubber #4 S-308 | Scrubber #5 S-309 |
|---|---|---|---|---|---|
| Minimum flow rate measured at nozzles (gal/min) | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 |
| Minimum flow rate measured at trays (gal/min) | 10.0 | 10.0 | 7.0 | 7.0 | 7.0 |

**(b) 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 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.**

**D.1.14 Parametric Monitoring - Wet Scrubbers**

**The Permittee shall monitor and record the pressure drop across the scrubbers controlling the Rotary Dryers (EU-32) at least once per day when the associated processes are in operation. When for any one reading, the pressure drop across a scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal**

**range for this unit is a pressure drop between 0.5 and 6.5 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the 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.**

**D.1.15 RTO Temperature**

**(a) A continuous monitoring system shall be calibrated, maintained, and operated on the RTO (CE-39b) for measuring operating temperature. For the purpose of this condition, continuous means no less often than once per fifteen (15) minutes. The output of this system shall be recorded as 3-hour average. From the date of startup until the stack test results are available, the Permittee shall operate the thermal oxidizer at or above the 3-hour average temperature of 1,400°F.**

**(b) The Permittee shall determine the 3-hour average temperature from the latest valid stack test that demonstrates compliance with limits in Conditions D.1.1, D.1.2, D.1.3, and D.1.4.**

**(c) On and after the date the stack test results are available, the Permittee shall operate the thermal oxidizer at or above the 3-hour average temperature as observed during the latest compliant stack test.**

**(d) If the 3-hour average temperature falls below the above mentioned 3-hour average temperature, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A 3-hour average temperature reading below the above mentioned 3-hour average temperature is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.**

**D.1.16 Parametric Monitoring - RTO**

**(a) The Permittee shall determine the appropriate duct pressure or fan amperage from the latest valid stack test that demonstrates compliance with limits in Conditions D.1.1, D.1.2, D.1.3, and D.1.4.**

**(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. On and after the date the stack test results are available, the duct pressure or fan amperage shall be maintained within the normal range as established in latest compliant stack test.**

**(c) When, for any one reading, the duct pressure or fan amperage is outside the above mentioned range, the Permittee shall take a reasonable response. Section C - Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.**

**(d) 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.**

~~D.1.8 Broken or Failed Bag Detection - Multi-Compartment Baghouse~~

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

**D.1.17 Broken or Failed Bag Detection**

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

**(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**

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

**Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.**

**D.1.18 Cyclone Failure Detection**

**In the event that a cyclone malfunction has been observed:**

**Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emission unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**

**D.1.19 Scrubber Failure Detection**

**In the event that a scrubber malfunction has been observed:**

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

**(b) For a scrubber controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the**

**processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**

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

D.1.~~9~~**20** Record Keeping Requirements

**(a) To Document the compliance status with Condition D.1.2(a), the Permittee shall maintain a monthly record of the total dryer feed rate for the Rotary Dryers (EU-32).**

(~~a~~**b**) To document the compliance status with Condition**s** ~~D.1.5~~ **D.1.11 and D.1.12**, the Permittee shall maintain a daily record of visible emission notations of the ~~corn receiving and storage~~ **baghouse and cyclone** stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the ~~corn receiving and storage~~ **process** did not operate that day).

~~(b) To document the compliance status with Condition D.1.6 and D.1.7, the Permittee shall maintain a daily record of the pressure drop across the baghouses controlling the corn receiving and storage and DDGS loadout facilities. 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 DDGS loadout facilities **process** did not operate that day).~~

**(c) To document the compliance status with Conditions D.1.13 and D.1.14, the Permittee shall maintain daily records of the Flow Rate and Pressure Drop for the scrubber. 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).**

**(d) To document the compliance status with Condition D.1.15, the Permittee shall maintain continuous temperature records for the RTO (CE-39b) and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.**

**(e) To document the compliance status with Condition D.1.16, the Permittee shall maintain daily records of the duct pressure or fan amperage for the RTO (CE-39b). 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).**

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

**D.1.21 Reporting Requirements**

**A quarterly summary of the information to document the compliance status with D.1.2(a) shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require 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).**

***

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

## Part 70 Quarterly Report

**Source Name:** **MGPI of Indiana**
**Source Address:** **7 Ridge Avenue, Lawrenceburg, Indiana 47025**
**Part 70 Permit No.:** **T029-32119-00005**
**Facility:** **Five (5) Rotary Dryers (EU-32)**
**Parameter:** **total dryer feed rate**
**Limit:** **shall not exceed 147,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**

**QUARTER :** **YEAR:**

| Month | Column 1 | Column 2 | Column 1 + Column 2 |
|---|---|---|---|
| | This Month | Previous 11 Months | 12 Month Total |
| Month 1 | | | |
| Month 2 | | | |
| Month 3 | | | |

☐ **No deviation occurred in this quarter.**

☐ **Deviation/s occurred in this quarter.**
**Deviation has been reported on:**

**Submitted by:** _____
**Title / Position:** _____
**Signature:** _____
**Date:** _____
**Phone:** _____

**Summary of Model Updates for E Conditions**

(a) IDEM, OAQ has revised the NSPS and NESHAP conditions for clarification purposes.

The permit has been revised as follows:

SECTION E.1 NSPS **- 40 CFR Part 60, Subpart Dc**

***

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~~-1~~ for the ~~one steam boiler, identified as EU-97~~ **emission units(s) listed above**, except as otherwise specified in 40 CFR Part 60, Subpart Dc.

**(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**

**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**

E.1.2 Small Industrial-Commercial-Institutional Steam Generating Units NSPS [40 CFR Part 60, Subpart Dc][326 IAC 12]

Pursuant to 40 CFR Part 60, Subpart Dc, the Permittee ~~which operates an industrial steam generating unit~~ shall comply with the provisions of 40 CFR Part 60, Subpart Dc, which are incorporated by reference as 326 IAC 12 (included as Attachment A of this permit) for ~~EU-97~~ **the emission unit(s) listed above** as specified as follows:

***

SECTION E.2 NESHAP **- 40 CFR Part 63, Subpart ZZZZ**

***

E.2.1 General Provisions Relating to National Emissions Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1][40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.6580, 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 ~~reciprocating internal combustion engines~~ **emission unit(s) listed above** as specified in 40 CFR Part 63, Subpart ZZZZ in accordance with the schedule in 40 CFR 63, Subpart ZZZZ.

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

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

E.2.2 National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ][326 IAC 20-82]

Pursuant to 40 CFR Part 63, Subpart ZZZZ, the Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment B to this permit) which are incorporated by reference as 326 IAC 20-82, for the ~~reciprocating internal combustion engines~~ **emission unit(s) listed above**, as specified as follows:

***

SECTION E.3 NESHAP **- 40 CFR Part 63, Subpart DDDDD**

***

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements
[326 IAC 2-7-5(1)]~~[326 IAC 2-8-4 (1)][326 IAC 2-6.1-5 (a)]~~

E.3.1 General Provision Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1][40 CFR Part 63, Subpart A]

Pursuant to 40 CFR 63**.7565**, 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 ~~natural gas fired boilers identified as EU-96 and EU-97~~ **emission unit(s) listed above, as specified in 40 CFR Part** ~~except as otherwise specified in 40 CFR~~ 63**,** Subpart DDDDD**, in accordance with the schedule in 40 CFR Part 63, Subpart DDDDD**.

E.3.2 National Emission Standards for Hazardous Air Pollutants (NESHAP) for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters [326 IAC 20-95][40 CFR 63 Subpart DDDDD]

Pursuant to 40 CFR 63 Subpart DDDDD, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart DDDDD, which are incorporated by reference at 326 IAC 20-95 (included as Attachment C of this permit) for the ~~natural gas fired boilers identified as EU-96 and EU-97~~ **emission unit(s) listed above,** as specified as follows:

***

## Conclusion and Recommendation

The construction and operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 029-35496-00005 and Significant Permit Modification No. 029-35318-00005. The staff recommend to the Commissioner that this Part 70 Significant Source and Significant Permit Modification be approved.

## IDEM Contact

(a) Questions regarding this proposed permit can be directed to Kristen Willoughby at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-3031 or toll free at 1-800-451-6027 extension 3-3031.

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

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

**Appendix A: Emissions Calculations**
**Summary of Emissions**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/14

| Potential to Emit Before Controls (ton\yr) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ***Significant Emission Units*** | **PM** (tons/yr) | **PM10** (tons/yr) | **PM2.5** (tons/yr) | **SO2** (tons/yr) | **NOx** (tons/yr) | **VOC** (tons/yr) | **CO** (tons/yr) | **GHG** (tons/yr) | **Total HAPs** (tons/yr) |
| One (1) pneumatic conveyor, identified as EU-11 | 189.22 | 189.22 | 16.08 | - | - | - | - | - | - |
| One (1) corn receiving and storage system, identified as EU-12 (Stack S-111) | 225.26 | 225.26 | 19.15 | - | - | - | - | - | - |
| One (1) grain transport system, identified as EU-12 (Stack S-112) | 20.33 | 20.33 | 1.73 | - | - | - | - | - | - |
| Seven (7) storage bins, collectively identified as EU-13 | 20.33 | 20.33 | 1.73 | - | - | - | - | - | - |
| Six (6) hammermills, collectively identified as EU-14 | 90.10 | 90.10 | 7.66 | - | - | - | - | - | - |
| EU-21, which consists of fourteen (14) open fermenters | - | - | - | - | - | 7.81 | - | - | 0.04 |
| DDGS Storage (EU-34) | 29.76 | 29.76 | 2.53 | - | - | - | - | - | - |
| DDGS Rail/Truck Loadout (EU-35/EU-36) | 27.18 | 27.18 | 2.31 | - | - | - | - | - | - |
| DDGS Rail/Truck Loader(EU-37/EU-38) | 0.27 | 0.27 | 0.05 | - | - | - | - | - | - |
| Twenty-four (24) closed fermenters, collectively identified as EU-22 | - | - | - | - | - | 57.79 | - | - | 0.26 |
| Two (2) beer wells, identified as EU-23 and EU-24 | - | - | - | - | - | 12.51 | - | - | - |
| Distillation (EU-20 and EU-25 through EU-29) | - | - | - | - | - | 0.09 | - | - | 3.43E-03 |
| Four (4) paddle screens, identified as EU-31 and three (3) conveyors, identified as EU-33 | - | - | - | - | - | 440.00 | - | - | 2.00 |
| Five (5) rotary dryers, collectively identified as EU-32 | 201.04 | 201.04 | 201.04 | - | - | 893.43 | - | - | 69.90 |
| One (1) cooler, and one (1) transport system, collectively identified as EU-32 | 61.22 | 46.01 | 8.12 | - | - | 9.16 | - | - | 1.28 |
| One (1) DDG Dryer, identified as EU-39 | 418.77 | 418.77 | 418.77 | 18.84 | 27.86 | 418.77 | 464.28 | 27,473 | 39.36 |
| Wet Pad, identified as EU-40 | - | - | - | - | - | See Note | - | - | See Note |
| One (1) wine room, identified as EU-41 | - | - | - | - | - | 19.52 | - | - | - |
| One (1) tank farm, identified as EU-42 | - | - | - | - | - | 19.01 | - | - | - |
| EU-43, which consists of Building 88 | - | - | - | - | - | 4.69 | - | - | - |
| One (1) mini-tank farm, identified as EU-45 | - | - | - | - | - | 3.59 | - | - | - |
| One (1) barrel and emptying operation, identified as EU-61 | - | - | - | - | - | 12.01 | - | - | - |
| Six (6) warehouses, identified as EU-71 through EU-76 | - | - | - | - | - | 1867.41 | - | - | - |
| One (1) steam boiler, identified as EU-96 | 1.99 | 7.96 | 7.96 | 0.63 | 293.37 | 5.76 | 88.01 | 126,479 | 1.98 |
| One (1) steam boiler, identified as EU-97 (worst case fuel) | 2.85 | 3.28 | 2.21 | 60.77 | 28.53 | 1.12 | 17.17 | 31,926 | 0.39 |
| One (1) loading rack, identified as EU-46 | - | - | - | - | - | 6.69 | - | | 0.05 |
| **Subtotal Significant Emission Unit** | **1288.34** | **1279.53** | **689.34** | **80.25** | **349.76** | **3779** | **569.46** | **185878** | **115.2** |
| **Fugitive Emissions** | **-** | **-** | **-** | **-** | **-** | **128.2** | **-** | | **0.90** |
| Emergency Generator-Diesel | 0.28 | 0.16 | 0.16 | 1.62 | 9.60 | 0.28 | 2.20 | 462 | 4.41E-03 |
| Emergency Generator-Natural gas | 1.16E-03 | 1.46E-03 | 1.46E-03 | 1.78E-05 | 0.10 | 3.63E-03 | 0.01 | 4.29 | 2.38E-03 |
| FW Pump-Diesel | 0.13 | 0.13 | 0.13 | 0.12 | 1.82 | 0.15 | 0.39 | 67.79 | 1.59E-03 |
| **Subtotal Insignificant Activities** | **0.41** | **0.29** | **0.29** | **1.74** | **11.5** | **0.43** | **2.60** | **533.65** | **8.38E-03** |
| **Total** | **1288.75** | **1279.82** | **689.63** | **81.99** | **361.28** | **3908** | **572.07** | **186412** | **116.15** |

*Note: This plant is capable to produce both DDGS and MDGS. The emissions from the DDGS production is the worst case scenario. Therefore, the PTE of the wet cake storage is not included in the PTE for the entire source.*

**Appendix A: Emissions Calculations**
**Summary of Emissions**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

| Potential to Emit After Control (ton\yr) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ***Significant Emission Units*** | **PM** (tons/yr) | **PM10** (tons/yr) | **PM2.5** (tons/yr) | **SO2** (tons/yr) | **NOx** (tons/yr) | **VOC** (tons/yr) | **CO** (tons/yr) | **GHG** (tons/yr) | **Total HAPs** (tons/yr) |
| One (1) pneumatic conveyor, identified as EU-11 | 1.89 | 1.89 | 0.32 | - | - | - | - | - | - |
| One (1) corn receiving and storage system, identified as EU-12 (Stack S-111) | 2.25 | 2.25 | 0.38 | - | - | - | - | - | - |
| One (1) grain transport system, identified as EU-12 (Stack S-112) | 0.20 | 0.20 | 0.03 | - | - | - | - | - | - |
| Seven (7) storage bins, collectively identified as EU-13 | 0.20 | 0.20 | 0.03 | - | - | - | - | - | - |
| Six (6) hammermills, collectively identified as EU-14 | 0.90 | 0.90 | 0.15 | - | - | - | - | - | - |
| EU-21, which consists of fourteen (14) open fermenters | - | - | - | - | - | 7.81 | - | - | 0.04 |
| DDGS Storage (EU-34) | 0.30 | 0.30 | 0.05 | - | - | - | - | - | - |
| DDGS Rail/Truck Loadout (EU-35/EU-36) | 0.27 | 0.27 | 0.05 | - | - | - | - | - | - |
| DDGS Rail/Truck Loader(EU-37/EU-38) | 0.27 | 0.27 | 0.05 | - | - | - | - | - | - |
| Twenty-four (24) closed fermenters, collectively identified as EU-22 | - | - | - | - | - | 57.79 | - | - | 0.26 |
| Two (2) beer wells, identified as EU-23 and EU-24 | - | - | - | - | - | 12.51 | | - | |
| Distillation (EU-20 and EU-25 through EU-29) | - | - | - | - | - | 0.09 | - | - | 3.43E-03 |
| Four (4) paddle screens, identified as EU-31 and three (3) conveyors, identified as EU-33 | - | - | - | - | - | 440.00 | - | - | 2.00 |
| Five (5) rotary dryers, collectively identified as EU-32 | 30.16 | 30.16 | 30.16 | - | - | 893.43 | - | - | 69.90 |
| One (1) cooler, and one (1) transport system, collectively identified as EU-32 | 5.74 | 3.80 | 1.81 | - | - | 9.16 | - | - | 1.28 |
| One (1) DDG Dryer, identified as EU-39 | 8.38 | 8.38 | 8.38 | 18.84 | 27.86 | 8.38 | 46.43 | 27,473 | 1.18 |
| Wet Pad, identified as EU-40 | - | - | - | - | - | See Note | - | - | - |
| One (1) wine room, identified as EU-41 | - | - | - | - | - | 19.52 | - | - | - |
| One (1) tank farm, identified as EU-42 | - | - | - | - | - | 19.01 | - | - | - |
| EU-43, which consists of Building 88 | - | - | - | - | - | 4.69 | - | - | - |
| One (1) mini-tank farm, identified as EU-45 | - | - | - | - | - | 3.59 | - | - | - |
| One (1) barrel and emptying operation, identified as EU-61 | - | - | - | - | - | 12.01 | - | - | - |
| Six (6) warehouses, identified as EU-71 through EU-76 | - | - | - | - | - | 1867 | - | - | - |
| One (1) steam boiler, identified as EU-96 | 1.99 | 7.96 | 7.96 | 0.63 | 293.37 | 5.76 | 88.01 | 126,479 | 1.98 |
| One (1) steam boiler, identified as EU-97 (worst case fuel) | 2.85 | 3.28 | 2.21 | 60.77 | 28.53 | 1.12 | 17.17 | 31,926 | 0.39 |
| One (1) loading rack, identified as EU-46 | - | - | - | - | - | 6.69 | - | | 0.05 |
| **Subtotal Significant Emission Unit** | **55.41** | **59.87** | **51.58** | **80.25** | **349.76** | **3,369** | **151.61** | **185,878** | **77.07** |
| **Fugitive Emissions** | **-** | **-** | **-** | **-** | **-** | **128.2** | **-** | | **0.90** |
| Emergency Generator-Diesel | 0.28 | 0.16 | 0.16 | 1.62 | 9.60 | 0.28 | 2.20 | 462 | 4.41E-03 |
| Emergency Generator-Natural gas | 1.16E-03 | 1.46E-03 | 1.46E-03 | 1.78E-05 | 0.10 | 3.63E-03 | 0.01 | 4.29 | 2.38E-03 |
| FW Pump-Diesel | 0.13 | 0.13 | 0.13 | 0.12 | 1.82 | 0.15 | 0.39 | 67.8 | 1.59E-03 |
| **Subtotal Insignificant Activities** | **0.41** | **0.29** | **0.29** | **1.74** | **11.52** | **0.43** | **2.60** | **534** | **8.38E-03** |
| **Total** | **55.82** | **60.16** | **51.87** | **81.99** | **361.28** | **3,498** | **154.21** | **186,412** | **77.97** |

*Note: This plant is capable to produce both DDGS and MDGS. The emissions from the DDGS production is the worst case scenario. Therefore, the PTE of the wet cake storage is not included in the PTE for the entire source.*

**Appendix A: Emissions Calculations**
**Summary of Emissions**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

| Potential to Emit After Issuance of Permit (Limited PTE) (ton\yr) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ***Significant Emission Units*** | **PM** (tons/yr) | **PM10** (tons/yr) | **PM2.5** (tons/yr) | **SO2** (tons/yr) | **NOx** (tons/yr) | **VOC** (tons/yr) | **CO** (tons/yr) | **GHG** (tons/yr) | **Total HAPs** (tons/yr) |
| One (1) pneumatic conveyor, identified as EU-11 | 189.22 | 189.22 | 16.08 | - | - | - | - | - | - |
| One (1) corn receiving and storage system, identified as EU-12 (Stack S-111) | 5.26 | 5.26 | 19.15 | - | - | - | - | - | - |
| One (1) grain transport system, identified as EU-12 (Stack S-112) | 0.96 | 0.96 | 1.73 | - | - | - | - | - | - |
| Seven (7) storage bins, collectively identified as EU-13 | 20.33 | 20.33 | 1.73 | - | - | - | - | - | - |
| Six (6) hammermills, collectively identified as EU-14 | 90.1 | 90.1 | 7.66 | - | - | - | - | - | - |
| EU-21, which consists of fourteen (14) open fermenters | - | - | - | - | - | 7.81 | - | - | 0.04 |
| DDGS Storage (EU-34) | 0.60 | 0.60 | 2.53 | - | - | - | - | - | - |
| DDGS Rail/Truck Loadout (EU-35/EU-36) | 1.27 | 1.27 | 2.31 | - | - | - | - | - | - |
| DDGS Rail/Truck Loader(EU-37/EU-38) | 5.48 | 5.48 | 0.05 | - | - | - | - | - | - |
| Twenty-four (24) closed fermenters, collectively identified as EU-22 | - | - | - | - | - | 57.79 | - | - | 0.26 |
| Two (2) beer wells, identified as EU-23 and EU-24 | - | - | - | - | - | 12.51 | - | - | - |
| Distillation (EU-20 and EU-25 through EU-29) | - | - | - | - | - | 0.09 | - | - | 0.00 |
| Four (4) paddle screens, identified as EU-31 and three (3) conveyors, identified as EU-33 | - | - | - | - | - | 440.00 | - | - | 2.00 |
| Five (5) rotary dryers, collectively identified as EU-32 | 19.85 | 19.85 | 19.85 | - | - | 893.43 | - | - | 69.90 |
| One (1) cooler, and one (1) transport system, collectively identified as EU-32 | 7.91 | 5.01 | 2.01 | - | - | 9.16 | - | - | 1.28 |
| One (1) DDG Dryer, identified as EU-39 | 8.4 | 8.4 | 8.4 | 18.84 | 27.86 | 8.38 | 46.43 | 27,473 | 20.30 |
| Wet Pad, identified as EU-40 | - | - | - | - | - | See Note | - | - | - |
| One (1) wine room, identified as EU-41 | - | - | - | - | - | 19.52 | - | - | - |
| One (1) tank farm, identified as EU-42 | - | - | - | - | - | 19.01 | - | - | - |
| EU-43, which consists of Building 88 | - | - | - | - | - | 4.69 | - | - | - |
| One (1) mini-tank farm, identified as EU-45 | - | - | - | - | - | 3.59 | - | - | - |
| One (1) barrel and emptying operation, identified as EU-61 | - | - | - | - | - | 12.01 | - | - | - |
| Six (6) warehouses, identified as EU-71 through EU-76 | - | - | - | - | - | 1,867 | - | - | - |
| One (1) steam boiler, identified as EU-96 | 1.99 | 7.96 | 7.96 | 0.63 | 293.4 | 5.76 | 88.0 | 126,479 | 1.98 |
| One (1) steam boiler, identified as EU-97 (worst case fuel) | 1.98 | 2.65 | 1.96 | 39.77 | 25.38 | 0.56 | 10.42 | 56,600 | 0.40 |
| One (1) loading rack, identified as EU-46 | - | - | - | - | - | 6.69 | - | - | 0.05 |
| **Subtotal Significant Emission Unit** | **353.31** | **357.04** | **91.39** | **59.25** | **346.61** | **3,368** | **144.86** | **210,552** | **96.20** |
| **Fugitive Emissions** | **-** | **-** | **-** | **-** | **-** | **128.23** | **-** | **-** | **0.90** |
| Emergency Generator-Diesel | 0.28 | 0.16 | 0.16 | 1.62 | 9.60 | 0.28 | 2.20 | 462 | 4.41E-03 |
| Emergency Generator-Natural gas | 1.16E-03 | 1.46E-03 | 1.46E-03 | 1.78E-05 | 0.10 | 3.63E-03 | 0.01 | 4.29 | 2.38E-03 |
| FW Pump-Diesel | 0.13 | 0.13 | 0.13 | 0.12 | 1.82 | 0.15 | 0.39 | 67.8 | 1.59E-03 |
| **Subtotal Insignificant Activities** | **0.41** | **0.29** | **0.29** | **1.74** | **11.5** | **0.43** | **2.60** | **534** | **8.38E-03** |
| **Total** | **353.72** | **357.33** | **91.68** | **60.99** | **358.13** | **3,497** | **147.46** | **211,085** | **97.11** |

*Note: This plant is capable to produce both DDGS and MDGS. The emissions from the DDGS production is the worst case scenario. Therefore, the PTE of the wet cake storage is not included in the PTE for the entire source.*

**Appendix A: Emissions Calculations**
**Summary of HAP Emissions**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

| ***Significant Emission Units*** | Benzene ton/yr | Dichlorobenzene ton/yr | Formaldehyde ton/yr | Hexane ton/yr | Toluene ton/yr | Lead ton/yr | Cadmium ton/yr | Chromium ton/yr | Manganese ton/yr | Nickel ton/yr | Acetaldehyde ton/yr | Propionaldehyde ton/yr | Methanol ton/yr | Acrolein ton/yr | PAH ton/yr | 1,3-Butadiene ton/yr | Xylene ton/yr | Total HAP ton/yr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| One (1) pneumatic conveyor, identified as EU-11 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.00 |
| One (1) corn receiving and storage system, identified as EU-12 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.00 |
| Seven (7) storage bins, collectively identified as EU-13 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.00 |
| Six (6) hammermills, collectively identified as EU-14 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.00 |
| EU-21, which consists of fourteen (14) open fermenters | - | - | 1.04E-03 | - | - | - | - | - | - | - | 0.03 | 2.09E-03 | 1.04E-03 | - | - | - | - | 0.04 |
| Silos, surge hopper, and transport system: EU-34 through EU-36 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.00 |
| Twenty-four (24) closed fermenters, collectively identified as EU-22 | - | - | 7.69E-03 | - | - | - | - | - | - | - | 0.23 | 1.54E-02 | 7.69E-03 | - | - | - | - | 0.26 |
| Two (2) beer wells, identified as EU-23 and EU-24 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.00 |
| Distillation (EU-20 and EU-25 through EU-29) | - | - | 2.04E-04 | - | - | - | - | - | - | - | 2.81E-03 | 2.04E-04 | 2.04E-04 | - | - | - | - | 3.43E-03 |
| Four (4) paddle screens, identified as EU-31 and three (3) conveyors, identified as EU-33 | - | - | 5.84E-02 | - | - | - | - | - | - | - | 1.77 | 0.12 | 0.06 | - | - | - | - | 2.00 |
| Five (5) rotary dryers, collectively identified as EU-32 | - | - | 0.32 | - | - | - | - | - | - | - | 55.24 | - | 11.05 | 3.28 | - | - | - | 69.90 |
| One (1) cooler, and one (1) transport system, collectively identified as EU-32 | - | - | 0.43 | - | - | - | - | - | - | - | 0.69 | - | 0.15 | 0.01 | - | - | - | 1.28 |
| One (1) DDG Dryer, identified as EU-39 | 4.78E-04 | 2.73E-04 | 12.98 | 0.41 | 7.74E-04 | 1.14E-04 | 2.50E-04 | 3.19E-04 | 8.65E-05 | 4.78E-04 | 20.94 | - | 4.61 | 0.42 | | | | 39.36 |
| Wet Pad, identified as EU-40 | See Note | | | | | | | | | | | | | | | | | - |
| One (1) rail car loader and one (1) truck loader, identified as EU-37 and EU-38 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.00 |
| One (1) wine room, identified as EU-41 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.00 |
| One (1) tank farm, identified as EU-42 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.00 |
| EU-43, which consists of Building 88 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.00 |
| One (1) mini-tank farm, identified as EU-45 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.00 |
| One (1) barrel and emptying operation, identified as EU-61 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.00 |
| Six (6) warehouses, identified as EU-71 through EU-76 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.00 |
| One (1) steam boiler, identified as EU-96 | 2.20E-03 | 1.26E-03 | 0.08 | 1.89 | 3.56E-03 | 5.24E-04 | 1.15E-03 | 1.47E-03 | 3.98E-04 | 2.20E-03 | - | - | - | - | - | - | - | 1.98 |
| One (1) steam boiler, identified as EU-97 (worst case fuel) | 4.29E-04 | 2.45E-04 | 0.02 | 0.37 | 6.95E-04 | 1.80E-03 | 5.99E-04 | 5.99E-04 | 1.20E-03 | 5.99E-04 | - | - | - | - | - | - | - | 0.39 |
| One (1) loading rack, identified as EU-46 | - | - | 6.69E-03 | - | - | - | - | - | - | - | 6.69E-03 | - | 3.34E-02 | - | - | - | - | 0.05 |
| Fugitive Emissions | - | - | 0.13 | - | - | - | - | - | - | - | 1.28E-01 | - | 6.41E-01 | - | - | - | - | 0.90 |
| **Subtotal Significant Emission Unit** | **3.11E-03** | **1.78E-03** | **14.02** | **2.66** | **5.03E-03** | **2.44E-03** | **2.00E-03** | **2.38E-03** | **1.68E-03** | **3.28E-03** | **79.0** | **0.14** | **16.55** | **3.71** | **0.00E+00** | **0.00E+00** | **0.00E+00** | **116.15** |
| Emergency Generator-Diesel | 2.17E-03 | - | 2.21E-04 | - | 7.87E-04 | - | - | - | - | - | 7.06E-05 | - | - | 2.21E-05 | 5.94E-04 | - | 5.40E-04 | 4.41E-03 |
| Emergency Generator-Natural gas | 5.87E-05 | - | 1.67E-03 | 1.35E-05 | - | - | - | - | - | - | 2.35E-04 | - | 7.50E-05 | 2.35E-04 | 4.05E-06 | 2.48E-05 | - | 2.32E-03 |
| FW Pump-Diesel | 3.84E-04 | - | 4.85E-04 | - | 1.68E-04 | - | - | - | - | - | 3.15E-04 | - | - | 3.80E-05 | 6.91E-05 | - | 1.17E-04 | 1.58E-03 |
| **Subtotal Insignificant Activities** | **2.62E-03** | **0.00E+00** | **2.38E-03** | **1.35E-05** | **9.55E-04** | **0.00E+00** | **0.00E+00** | **0.00E+00** | **0.00E+00** | **0.00E+00** | **6.21E-04** | **0.00E+00** | **7.50E-05** | **2.95E-04** | **6.67E-04** | **2.48E-05** | **6.58E-04** | **0.008** |
| **Total** | **5.72E-03** | **1.78E-03** | **14.03** | **2.66** | **5.99E-03** | **2.44E-03** | **2.00E-03** | **2.38E-03** | **1.68E-03** | **3.28E-03** | **79.0** | **0.14** | **16.55** | **3.71** | **6.67E-04** | **2.48E-05** | **6.58E-04** | **116.155** |

*Note: This plant is capable to produce both DDGS and MDGS. The emissions from the DDGS production is the worst case scenario. Therefore, the PTE of the wet cake storage is not included in the PTE for the entire source.*

**Appendix A: Emissions Calculations**
**Grain Handling**

**Company Name: MGPI of Indiana, LLC**
**Address: 7 Ridge Avenue, Lawrenceburg, Indiana 47025**
**Significant Source Modification No.: 029-35496-00005**
**Significant Permit Modification No.: 029-35505-00005**
**Reviewer: Kristen Willoughby**
**Date: 12/22/2014**

| Stack ID | Process Description | Control Device | Outlet Grain Loading (gr/dscf) | Maximum Air Flow Rate (scfm) | PTE of PM/PM10 after Control* (lb/hr) | PTE of PM/PM10 after Control (ton/yr) | PTE of PM2.5 after Control** (lb/hr) | PTE of PM2.5 after Control (ton/yr) | PM/PM10 Control Efficiency | PM2.5 Control Efficiency | PTE of PM/PM10 before Control (ton/yr) | PTE of PM2.5 before Control (ton/yr) | Limited PTE PM (lb/hr) | Limited PTE PM10 (lb/hr) | Limited PTE PM2.5 (lb/hr) | Limited PTE PM (ton/yr) | Limited PTE PM10 (ton/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-103 | Grain Receiving and pneumatic conveyor EU-11 | Baghouse | 0.004 | 12,600 | 0.43 | 1.89 | 0.07 | 0.32 | 99% | 98% | 189.2 | 16.1 | | | | | |
| S-111 | Corn Receiving and storage system EU-12 | Baghouse | 0.004 | 15,000 | 0.51 | 2.25 | 0.09 | 0.38 | 99% | 98% | 225.3 | 19.1 | 1.20 | 1.20 | 1.20 | 5.26 | 5.26 |
| S-112 | Grain Transport system EU-12 | Baghouse | 0.004 | 1,354 | 0.05 | 0.20 | 0.01 | 0.03 | 99% | 98% | 20.3 | 1.73 | 0.219 | 0.219 | 0.219 | 0.96 | 0.96 |
| inside | Storage: (7) Grain Storage Silos (EU-13) | Baghouse | 0.004 | 1,354 | 0.05 | 0.20 | 0.01 | 0.03 | 99% | 98% | 20.3 | 1.73 | | | | | |
| S-104 | (6) Hammermills and hopper (EU-14) | Baghouse | 0.004 | 6,000 | 0.21 | 0.90 | 0.03 | 0.15 | 99% | 98% | 90.1 | 7.66 | | | | | |
| | **DDGS Storage (EU-34)** | | | | | | | | | | | | | | | | |
| S-341 | Storage silo | Baghouse | 0.004 | 905 | 0.03 | 0.14 | 0.01 | 0.02 | 99% | 98% | 13.6 | 1.16 | 0.136 | 0.136 | 0.136 | 0.60 | 0.60 |
| S-342 | Storage silo | Baghouse | 0.004 | 905 | 0.03 | 0.14 | 0.01 | 0.02 | 99% | 98% | 13.6 | 1.16 | | | | | |
| S-343 | Surge Hopper | Baghouse | 0.004 | 86 | 0.00 | 0.01 | 0.00 | 0.00 | 99% | 98% | 1.3 | 0.11 | | | | | |
| S-344 | Surge Hopper | Baghouse | 0.004 | 86 | 0.00 | 0.01 | 0.00 | 0.00 | 99% | 98% | 1.3 | 0.11 | | | | | |
| S-350 | DDGS Rail Loadout (EU-35) | Baghouse | 0.004 | 905 | 0.03 | 0.14 | 0.01 | 0.02 | 99% | 98% | 13.6 | 1.16 | 0.289 | 0.289 | 0.289 | 1.27 | 1.27 |
| S-360 | DDGS Truck Loadout (EU-36) | Baghouse | 0.004 | 905 | 0.03 | 0.14 | 0.01 | 0.02 | 99% | 98% | 13.6 | 1.16 | | | | | |
| S-370 | DDGS Rail Car Loader (EU-37) | None | 0.004 | 905 | 0.03 | 0.14 | 0.01 | 0.02 | 0% | 0% | 0.14 | 0.02 | 1.25 | 1.25 | 1.25 | 5.48 | 5.48 |
| S-380 | DDGS Truck Loader (EU-38) | None | 0.004 | 905 | 0.03 | 0.14 | 0.01 | 0.02 | 0% | 0% | 0.14 | 0.02 | | | | | |
| **Total** | | | | | **1.4** | **6.3** | **0.2** | **1.1** | **10.9** | **10.8** | **602.5** | **51.2** | **3.1** | **3.1** | **3.1** | **13.6** | **13.6** |

*Assume all PM emissions equal PM10 emissions.

** Assume controlled PM2.5 emissions equal 17% PM/PM10 emissions (AP-42 Table 9.9.1-1 Reference 40).

**Methodology:**

outlet grain loading (gr/dscf) provided by source with maximum air flow rate (scfm)

PTE of PM/PM10 after Control (lb/hr) = Outlet Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x (60 min/hr) x (1 lb/7000 gr)

PTE of PM/PM10 after Control (ton/yr) = Outlet Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x (60 min/hr) x (1 lb/7000 gr) x (8760 hr/yr) x (1 ton/2000 lb)

PTE before Control (ton/yr) = PTE after Control (ton/yr) / (1-Control Efficiency)

PM2.5 Control Efficiency is assumed to be less than the PM/PM10 Control Efficiency.

**Appendix A: Emissions Calculations**
**VOC Emissions from Distillation and Beer Wells**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

**EU-20, 25-29 Distillation**

**Potential to Emit (PTE) of VOC:**

| Maximum Usage (gal/hr) | VOC Emission Factor (lb/1000 gal) | VOC Emission rate (lb/hr) | VOC Emission rate (ton/yr) |
|---|---|---|---|
| 31,221 | 0.000679 | 0.02 | 0.1 |

**Methodology:**

Emission factor is based on facility information and furnished by source.
Emission Rate (lb/hr) = Usage (gal/hr)/1,000 x EF (lb/1,000 gal)
Emission Rate (ton/yr) = Emission Rate (lb/hr) x 8,760 hr/yr / 2,000 lb/ton

**EU-20, EU25- EU-29 Distillation Operations**

**VOC (lb/hr) = 0.02**

| | Distillation | |
|---|---|---|
| **Uncontrolled PTE** | **lb HAPs/lb VOC** | **ton/yr** |
| Acetaldehyde | 3.03E-02 | 2.81E-03 |
| Propionaldehyde | 2.20E-03 | 2.04E-04 |
| Methanol | 2.20E-03 | 2.04E-04 |
| Formaldehyde | 2.20E-03 | 2.04E-04 |
| **Total Uncontrolled HAP** | | **3.43E-03** |

**Methodology:**

lb HAPs/lb VOC emission factors are from uncontrolled distillation in Permit No. T133-31145-00003
HAP (ton/yr) = E.F. (lb HAPs/lb VOC) x VOC (lb/hr) x 8760 (hrs/yr) x 1/2000 (ton/lb)

**EU-23 and EU-24 Beer Wells #3 and #1**

Maximum Usage 1,050 1,000 bu/hr

| Pollutant | (lb/1,000 bu) | (lb/yr) | (ton/yr) |
|---|---|---|---|
| VOC | 2.72 | 2.86 | 12.5 |

**Methodology:**

Emission factor is based on facility information and furnished by source.
Emission rate (lb/hr) = Maximum usage (1,000 bu/hr) x EF (lb / 1,000 bu)
Emission Rate (lb/hr) = Emission Rate (ton/yr) x 2,000 lb/ton / 8,760 hr/yr

**Appendix A: Emissions Calculations**
***VOC Emissions from Open and Closed Fermentation***

**Company Name: MGPI of Indiana, LLC**
**Address: 7 Ridge Avenue, Lawrenceburg, Indiana 47025**
**Significant Source Modification No.: 029-35496-00005**
**Significant Permit Modification No.: 029-35505-00005**
**Reviewer: Kristen Willoughby**
**Date: 12/22/2014**

**EU-21 Open Fermentation**

**Potential to Emit (PTE) of VOC from Open Fermentation:**

Maximum Usage 1,095,000 bu/yr

| Pollutant | Emission Factor (lb/1,000 bu) | VOC Emission rate (lb/yr) | VOC Emission rate (ton/yr) | VOC Emission rate (lb/hr) |
|---|---|---|---|---|
| Ethanol | 14.2 | 15,549 | 7.77 | 1.78 |
| Ethyl Acetate | 0.046 | 50 | 0.03 | 0.006 |
| Isoamyl Alcohol | 0.013 | 14 | 0.007 | 0.002 |
| Isobutyl Alcohol | 0.004 | 4 | 0.002 | 0.0005 |
| Total VOC | 14.3 | | 7.81 | 1.78 |

**Methodology:**

Emission Factors taken from AP-42, Table 9.12.3-1
Emission Rate (ton/yr) = Usage (bu/yr)/1,000 x Emission Factor (lb/1,000 bu) / 2,000 lb/ton
Emission Rate (lb/hr) = Emission Rate (ton/yr) x 2,000 lb/ton / 8,760 hr/yr

**Potential to Emit (PTE) of HAP from Open Fermentation:**

**VOC (lb/hr) = 1.78**

| | Open Fermentation | |
|---|---|---|
| **Uncontrolled PTE** | **lb HAPs/lb VOC** | **ton/yr** |
| Acetaldehyde | 4.02E-03 | 3.14E-02 |
| Propionaldehyde | 2.67E-04 | 2.09E-03 |
| Methanol | 1.33E-04 | 1.04E-03 |
| Formaldehyde | 1.33E-04 | 1.04E-03 |
| **Total Uncontrolled HAP** | | **0.04** |

**Methodology:**

lb HAPs/lb VOC emission factors are from uncontrolled distillation in Permit No. T133-31145-00003
HAP (ton/yr) = E.F. (lb HAPs/lb VOC) x VOC (lb/hr) x 8760 (hrs/yr) x 1/2000 (ton/lb)

**EU-22 Closed Fermentation**

**Potential to Emit (PTE) of VOC Closed Fermentation:**

Maximum Usage 8,103,000 bu/yr

| Pollutant | (lb/1,000 bu) | (lb/yr) | (ton/yr) | (lb/hr) |
|---|---|---|---|---|
| Ethanol | 14.2 | 115,063 | 57.53 | 13.14 |
| Ethyl Acetate | 0.046 | 373 | 0.19 | 0.04 |
| Isoamyl Alcohol | 0.013 | 105 | 0.05 | 0.01 |
| Isobutyl Alcohol | 0.004 | 32 | 0.02 | 0.004 |
| **Uncontrolled VOC** | **14.263** | | **57.8** | **13.2** |

**Methodology:**

Emission Factors taken from AP-42, Table 9.12.3-1
Emission Rate (ton/yr) = Usage (bu/yr)/1,000 x Emission Factor (lb/1,000 bu) / 2,000 lb/ton
Emission Rate (lb/hr) = Emission Rate (ton/yr) x 2,000 lb/ton / 8,760 hr/yr

**Potential to Emit (PTE) of HAP from Closed Fermentation:**

**VOC (lb/hr) = 13.19**

| | Closed Fermentation | |
|---|---|---|
| **Uncontrolled PTE** | **lb HAPs/lb VOC** | **ton/yr** |
| Acetaldehyde | 4.02E-03 | 2.32E-01 |
| Propionaldehyde | 2.67E-04 | 1.54E-02 |
| Methanol | 1.33E-04 | 7.69E-03 |
| Formaldehyde | 1.33E-04 | 7.69E-03 |
| **Total Uncontrolled HAP** | | **0.26** |

**Methodology:**

lb HAPs/lb VOC emission factors are from uncontrolled distillation in Permit No. T133-31145-00003
HAP (ton/yr) = E.F. (lb HAPs/lb VOC) x VOC (lb/hr) x 8760 (hrs/yr) x 1/2000 (ton/lb)

**Appendix A: Emissions Calculations**
**Summary of Emissions**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

**EU-31 and EU-33 Paddle Screens/ Conveyors**

| Source | Max Usage (gal/hr) | VOC Emission Factor* (lb/1,000 gal) | VOC Emission rate (lb/hr) | VOC Emission rate (ton/yr) |
|---|---|---|---|---|
| Spirits System | 20,859 | 3.4 | 70.92 | 311 |
| Whisky System | 4,319 | 6.8 | 29.37 | 129 |
| | | **Total:** | **100** | **440** |

**Methodology:**

Emission Rate = Maximum Usage (gal/hr)/1,000 x VOC Emission factor (lb/1,000 gal)
* Spirits System analysis of stillage based on 0.05% alcohol concentration.
*Whisky System analysis of stillage based on 0.1% alcohol concentration.

**VOC (lb/hr) = 100.29**

| | Stillage | |
|---|---|---|
| **Uncontrolled PTE** | **lb HAPs/lb VOC** | **ton/yr** |
| Acetaldehyde | 4.02E-03 | 1.77 |
| Propionaldehyde | 2.67E-04 | 1.17E-01 |
| Methanol | 1.33E-04 | 5.84E-02 |
| Formaldehyde | 1.33E-04 | 5.84E-02 |
| **Total Uncontrolled HAP** | | **2.00** |

**Methodology:**

lb HAPs/lb VOC emission factors are from uncontrolled distillation in Permit No. T133-31145-00003 and derived from the mash scrubber emissions
HAP (ton/yr) = E.F. (lb HAPs/lb VOC) x VOC (lb/hr) x 8760 (hrs/yr) x 1/2000 (ton/lb)

**Appendix A: Emissions Calculations**
**Five (5) rotary dryers**

**Company Name:** **MGPI of Indiana, LLC**
**Address:** **7 Ridge Avenue, Lawrenceburg, Indiana 47025**
**Significant Source Modification No.:** **029-35496-00005**
**Significant Permit Modification No.:** **029-35505-00005**
**Reviewer:** **Kristen Willoughby**
**Date:** **12/22/2014**

**EU-32 Rotary Dryers**

Maximum Usage: 25.5 ton/hr Limited Usage: 147,000 ton/yr

| | Controlled Emission Factor (lb/ton) | Controlled Emissions (lb/hr) | Controlled Emissions (ton/yr) | Uncontrolled Emissions (lb/hr) | Uncontrolled Emissions (ton/yr) | Limited Emissions (ton/yr) |
|---|---|---|---|---|---|---|
| PM | 0.27 | 6.885 | 30.2 | 45.90 | 201.0 | 19.85 |
| PM10 | 0.27 | 6.885 | 30.2 | 45.90 | 201.0 | 19.85 |
| PM2.5 | 0.27 | 6.885 | 30.2 | 45.90 | 201.0 | 19.85 |

**Methodology:**

Controlled emission Factor from AP-42, Table 9.9.7-1
Controlled Emissions (ton/yr) = Usage (ton/yr) x EF (lb/ton) x 8,760 hr/yr / 2,000 lb/ton
Uncontrolled emissions estimated based on an 85% control efficiency for controlled emissions.
PM2.5 emissions conservatively assumed to be equal to PM10 emissions.

**VOC Emissions from the Dryers**

| Dryer Feed Rate (ton/hr) | Water Content (% by wt) | VOC Content of Water (lb VOC/lb water) | Potential VOC from Dryers (lb/hr) | Potential VOCs from Dryers (ton/yr) |
|---|---|---|---|---|
| 25.5 | 66.66% | 0.006 | 204.0 | 893.4 |

**Methodology**

Potential VOC Emissions from Dryers (lb/hr) = Dryer Feed Rate (25.5 ton/hr) x Water Content of Feed (% by wt) x (lb VOC/lb water) x (2000 lb/1 ton)
Potential VOC Emissions from Dryers (ton/yr) = Potential VOC Emissions from Dryers (lb/hr) x (8760 hr/yr) x (1 ton/2000 lb)

**HAP Emissions from the Dryers**

| **HAP** | HAP % (by wt of VOC) | Potential HAP from Dryers (lb/hr) | Potential HAP from Dryers (ton/yr) |
|---|---|---|---|
| Acetaldehyde | 6.18% | 12.61 | 55.24 |
| Acrolein | 0.37% | 0.75 | 3.28 |
| Methanol | 1.24% | 2.52 | 11.05 |
| Formaldehyde | 0.04% | 0.07 | 0.32 |
| **Total** | | | **69.9** |

Note: HAP emission rates based on performance tests at similar facilities.

**Methodology**

Potential HAP Emissions from Dryers (lb/hr) = Potential VOC emissions from dryer (lb/hr) x HAP % by wt of VOC
Potential HAP Emissions from Dryers (ton/yr) = Potential HAP Emissions from Dryers (lb/hr) x (8760 hr/yr) x (1 ton/2000 lb)

**Appendix A: Emissions Calculations**
**DDG Cooler and Transport System Emission Estimates**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

| Emission Unit | Emission Point | Description | Uncontrolled PM Emission Factor | Uncontrolled $PM_{10}$ Emission Factor | Uncontrolled $PM_{2.5}$ Emission Factor | DDG throughput | | Uncontrolled PM Emission Rate | | Uncontrolled $PM_{10}$ Emission Rate | | Uncontrolled $PM_{2.5}$ Emission Rate | | Controlled PM Emission Rate | | Controlled $PM_{10}$ Emission Rate | | Controlled $PM_{2.5}$ Emission Rate | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | (lb/ton) | (lb/ton) | (lb/ton) | (ton/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) |
| EU-32 | 4 Screw Conveyors, 2 Drag Conveyors, 3 Product Conveyors, 1 K-Valve | Grain Conveying | 0.061 | 0.034 | 0.0058 | 9.56 | 83,754 | 0.58 | 2.55 | 0.33 | 1.42 | 0.06 | 0.24 | 0.09 | 0.38 | 0.05 | 0.21 | 0.01 | 0.04 |
| | Drum Cooler | Grain Conveying | 0.061 | 0.034 | 0.0058 | | | 0.58 | 2.55 | 0.33 | 1.42 | 0.06 | 0.24 | 0.58 | 2.55 | 0.33 | 1.42 | 0.06 | 0.24 |
| | | | | | | | **Totals** | **1.17** | **5.11** | **0.65** | **2.85** | **0.11** | **0.49** | **0.67** | **2.94** | **0.37** | **1.64** | **0.06** | **0.28** |

| Emission Unit | Emission Point | Description | Controlled PM Emission Factor | Controlled $PM_{10}$ Emission Factor | Controlled $PM_{2.5}$ Emission Factor | DDG throughput | | Controlled PM Emission Rate | | Controlled $PM_{10}$ Emission Rate | | Controlled $PM_{2.5}$ Emission Rate | | Uncontrolled PM Emission Rate | | Uncontrolled $PM_{10}$ Emission Rate | | Uncontrolled $PM_{2.5}$ Emission Rate | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | (lb/ton) | (lb/ton) | (lb/ton) | (ton/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) |
| EU-32 | Hammer Mill | Hammer Milling[(b)] | 0.067 | 0.052 | 0.036 | 9.56 | 83,754 | 0.64 | 2.81 | 0.49 | 2.16 | 0.35 | 1.53 | 12.81 | 56.12 | 9.86 | 43.17 | 1.74 | 7.64 |
| | | | | | | | **Totals** | **0.64** | **2.81** | **0.49** | **2.16** | **0.35** | **1.53** | **12.81** | **56.12** | **9.86** | **43.17** | **1.74** | **7.64** |

| Emission Unit | Emission Point | Description | Limited PM Emission Rate | | Limited $PM_{10}$ Emission Rate | | Limited $PM_{2.5}$ Emission Rate | |
|---|---|---|---|---|---|---|---|---|
| | | | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) |
| EU-32 | 4 Screw Conveyors, 2 Drag Conveyors, 3 Product Conveyors, 1 K-Valve | Grain Conveying | 0.58 | 2.55 | 0.33 | 1.42 | 0.06 | 0.24 |
| | Drum Cooler | Grain Conveying | 0.58 | 2.55 | 0.33 | 1.42 | 0.06 | 0.24 |
| EU-32 | Hammer Mill | Hammer Milling[(b)] | 0.64 | 2.81 | 0.49 | 2.16 | 0.35 | 1.53 |
| | | **Totals** | **1.81** | **7.91** | **1.14** | **5.01** | **0.46** | **2.01** |

**Methodology:**

(a) Factors taken from AP-42, Fifth Edition, Volume 1, Section 9.9.1 (Grain Elevators and Processes).
Controlled milling factor is taken from AP-42, Table 9.9.1-1, which accounts for cyclone controls in place on DDG cooling system. Uncontrolled emissions for hammermill is calculated assuming that the cyclone achieves 80% PM2.5 control and 85% PM/PM10 control.

(b) As recommended by AP-42 Appendix B.2, Table B.2.2 for Category 7 - "Grain Processing" on Page 17, the particle size distribution for $PM_{10}$ is 61% of Total PM and for $PM_{2.5}$ is 23% of Total PM for uncontrolled emissions. Additionally, AP-42 Appendix B.2, Table B.2.3 "Typical Collection Efficiencies of Various Particulate Control Devices" states that for high efficiency centrifugal collectors, the collection efficiency is 80% for $PM_{2.5}$ and 95% for $PM_{10}$. The size distribution of controlled PM emissions is calculated as presented below:

| **PM Size Range** | Uncontrolled wt% | Collection Efficiency | Controlled Wt | Controlled wt% |
|---|---|---|---|---|
| $PM_{2.5}$ | 23% | 80% | 0.046 | 54% |
| $PM_{2.5}$ to $PM_{10}$ | 38% | 95% | 0.019 | 22% |
| $PM_{10}$ and higher | 39% | 95% | 0.0195 | 23% |
| | 1 | | 0.0845 | |
| | | Overall control: | 91.6% | |

(c) Methodology:
Uncontrolled PTE (lb/hr) = [Uncontrolled Emission Factor (lb/ton DDG) x Production Rate (ton/hr)]
Uncontrolled PTE (ton/yr) = [Uncontrolled Emission Factor (lb/ton DDG) x Production Rate (ton/yr) / 2,000 lb/ton]
Controlled PTE Hammermill (lb/hr) = [Controlled Emission Factor (lb/ton DDG) x Production Rate (ton/hr)]
Controlled PTE Hammermill (ton/yr) = [Controlled Emission Factor (lb/ton DDG) x Production Rate (ton/yr) / 2,000 lb/ton]
Uncontrolled PTE PM2.5 Hammermill (lb/hr) = Controlled PTE Hammermill (lb/hr) / (1 - 80%)
Uncontrolled PTE PM/PM10 Hammermill (lb/hr) = Controlled PTE Hammermill (lb/hr) / (1 - 95%)
Uncontrolled PTE PM2.5 Hammermill (ton/yr) = Controlled PTE Hammermill (ton/yr) / (1 - 80%)
Uncontrolled PTE PM/PM10 Hammermill (ton/yr) = Controlled PTE Hammermill (ton/yr) / (1 - 95%)

**Appendix A: Emissions Calculations**
**DDG Cooler and Transport System Emission Estimates**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

| Emission Unit | Emission Point | Description | Uncontrolled Emission Factors[a] | | 0.219 lb/ton DDG | | 0.016 lbs/ton DDG | | 0.00033 lbs/ton DDG | | 0.010 lbs/ton DDG | | 0.0036 lbs/ton DDG | | Total HAP Emissions | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | DDG throughput | | VOC | | Acetaldehyde | | Acrolein | | Formaldehyde | | Methanol | | | |
| | | | (ton/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) |
| EU-32 | Drum Cooler | Cooling Drum Apparatus | 10 | 83,754 | 2.09 | 9.16 | 0.16 | 0.69 | 0.0031 | 0.014 | 0.10 | 0.43 | 0.034 | 0.15 | 0.292 | 1.28 |
| | Existing Screw Conveyor | Grain Conveying | | | | | | | | | | | | | | |
| | New 3 Screw Conveyors, 2 Drag Conveyors, 3 Product Conveyors, 1 K-Valve | Grain Conveying | | | | | | | | | | | | | | |
| | Existing Hammer Mill and Cyclone | Hammer Milling | | | | | | | | | | | | | | |

**Methodology:**

(a) VOC emission factor for DDG cooling taken from a similar operation permitted in Indiana under Permit #T169-31191-00068 (POET Biorefining - North Manchester). HAP emission factors are derived as a percentage of the VOC emission factor presented, assuming that individual HAPs are emitted in the same proportion from cooling as from the drying emissions provided in PTE calculations for DDG Dryer EU-39.

(b) Methodology :
Emission rate (lb/hr) = DDG Throughput (ton/hr) X DDG Cooling Emission factor (lb/ton)
Emission rate (ton/yr) = DDG Throughput (ton/yr) X DDG Cooling Emission factor (lb/ton) x ton/2,000 lb

Dryer emissions

| | tpy from Drying | % of VOC |
|---|---|---|
| VOC | 8.38 | -- |
| Acetaldehyde | 0.63 | 7.50% |
| Acrolein | 0.01 | 0.15% |
| Formaldehyde | 0.39 | 4.65% |
| Methanol | 0.14 | 1.65% |

Other DDG Cooler Emission Factors
POET Biorefining - N Manchester
5.685 lb VOC/hr From June 2004 testing at POET-Biorefining Jewell (IA)
26 ton DDG/hr
0.218653846 lb VOC / ton DDG

**Appendix B: Emissions Calculations**
**DDG Dryer (EU-39)**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

| Combustion Source | Hourly MMBtu/hr | Annual MMBtu/yr | Heat Content (Btu/scf) | Fuel Usage (MMcf/yr) |
|---|---|---|---|---|
| Direct-fired Dryer Heat Input Capacity[a] | 45 | 394,200 | 1,020 | 386.47 |
| RTO Heat Input Capacity[a] | 8 | 70,080 | 1,020 | 68.71 |
| Total Heat Input Capacity | 53 | 464,280 | | 455.18 |

| Production Capacity | ton/hr | ton/yr |
|---|---|---|
| Short-term Distiller's Dry Grain (DDG) Production[b] | 9.6 | 83,754 |

| | Pollutant | Control Efficiency |
|---|---|---|
| Control Efficiency For Criteria Emissions (% Removal)[c] | HAPs | 97% |
| | VOC | 98% |
| | CO | 90% |
| | $PM/PM_{10}/PM_{2.5}$ | 98% |

| Emissions From DDG Drying (EU-39) | Pollutant | NOx | | CO | | $SO_2$ | | VOC | | PM | | $PM_{10}$ | | $PM_{2.5}$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Uncontrolled Emission Factor | 0.12 lbs/MMBtu | | 2.0 lbs/MMBtu | | 0.45 lbs/ton DDG | | 10.0 lbs/ton DDG | | 10.0 lbs/ton DDG | | 10.0 lbs/ton DDG | | 10.0 lbs/ton DDG | |
| | Units | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy |
| Uncontrolled PTE | | 6.36 | 27.86 | 106.00 | 464.28 | 4.30 | 18.84 | 95.61 | 418.77 | 95.61 | 418.77 | 95.61 | 418.77 | 95.61 | 418.77 |
| Controlled PTE | | - | - | 10.60 | 46.43 | - | - | 1.91 | 8.38 | 1.91 | 8.38 | 1.91 | 8.38 | 1.91 | 8.38 |
| Limited PTE | | 6.36 | 27.86 | 10.60 | 46.43 | 4.30 | 18.84 | 1.91 | 8.38 | 1.91 | 8.38 | 1.91 | 8.38 | 1.91 | 8.38 |

| HAP Emissions From DDG Drying (EU-39) | Pollutant | Acetaldehyde | | Formaldehyde | | Acrolein | | Methanol | | Total HAP (from Natural Gas Combustion) | | Total HAP Emissions[e] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Uncontrolled Emission Factors[c] | 0.5 lbs/ton DDGS | | 0.31 lbs/ton DDGS | | 0.01 lbs/ton DDGS | | 0.11 lbs/ton DDGS | | See Below | | | |
| | Units | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy |
| Uncontrolled PTE | | 4.78 | 20.94 | 2.96 | 12.98 | 0.10 | 0.42 | 1.05 | 4.61 | 0.09 | 0.41 | 8.99 | 39.36 |
| Controlled PTE | | 0.14 | 0.63 | 0.09 | 0.39 | 0.00 | 0.01 | 0.03 | 0.14 | 2.82E-03 | 0.01 | 0.27 | 1.18 |
| Limited PTE | | 1.91 | 8.38 | 1.48 | 6.49 | 0.10 | 0.42 | 1.05 | 4.61 | 0.09 | 0.41 | 8.99 | 20.30 |

| | Combustion HAPs - Organics | | | | | |
|---|---|---|---|---|---|---|
| Emission Factor in lb/MMcf | Benzene 2.1E-03 | Dichlorobenzene 1.2E-03 | Formaldehyde Included Above | Hexane 1.8E+00 | Toluene 3.4E-03 | **Total - Organics** |
| Potential Emission in tons/yr | 4.779E-04 | 2.731E-04 | | 4.097E-01 | 7.738E-04 | **4.112E-01** |

| | Combustion HAPs - Metals | | | | | |
|---|---|---|---|---|---|---|
| Emission Factor in lb/MMcf | Lead 5.0E-04 | Cadmium 1.1E-03 | Chromium 1.4E-03 | Manganese 3.8E-04 | Nickel 2.1E-03 | **Total - Metals** |
| Potential Emission in tons/yr | 1.138E-04 | 2.503E-04 | 3.186E-04 | 8.648E-05 | 4.779E-04 | **1.247E-03** |

**Appendix B: Emissions Calculations**
**DDG Dryer (EU-39)**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

**Notes:** Design heat inputs of direct fired dryer and of thermal oxidizer provided by the manufacturer (ICM, Inc.).

(a) Maximum short-term distiller's dry grain (DDG) production rate taken from facility information. Capacity of proposed system will be equivalent to combined capacity of the existing steam-tube dryers (portion of existing EU-32). Material balance is as follows:

(b)

| | (lb/hr) | %solids |
|---|---|---|
| Dryer feed | 35,508 | 35.5% |
| Water / Evaporation | 21,508 | 0% |
| DDG Production | 14,000 | 90% |

Annual operations assume that the proposed dryer will operate at capacity continuously throughout the year.
Dryer uncontrolled emission factors and cyclone/thermal oxidizer control efficiencies provided by the manufacturer (ICM, Inc.). Assume $PM/PM_{10}$ emissions are equivalent. Under the Part 70 Permit Program particulate

(c) Dryer uncontrolled emission factors and thermal oxidizer control efficiencies provided by the manufacturer (ICM, Inc.). Emission factors for specific HAPs include both process emissions from the DDG drying operations and natural gas combustion emissions occurring within the direct-fired dryer. Emission factors include emissions form the screws, conveyors and agitator mixer leading to the dryer.

Methodology:

(d) Nox and CO:
Uncontrolled PTE (lb/hr) = [Uncontrolled Emission Factor (lb/MMBtu) x Design Firing Rate (MMBtu/hr)]
Uncontrolled PTE (ton/yr) = [Uncontrolled Emission Factor (lb/MMBtu) x Design Firing Rate (MMBtu/yr) / 2,000 lb/ton]
SO2:
Uncontrolled PTE (lb/hr) = [Uncontrolled Emission Factor (lb/ton DDG) x Production Rate (ton/hr)]
Uncontrolled PTE (ton/yr) = [Uncontrolled Emission Factor (lb/ton DDG) x Production Rate (ton/yr) / 2,000 lb/ton]
VOC, PM/PM10/PM2.5:
Uncontrolled PTE (lb/hr) = [Uncontrolled Emission Factor (lb/ton DDG) x Production Rate (ton/hr)]
Uncontrolled PTE (ton/yr) = [Uncontrolled Emission Factor (lb/ton DDG) x Production Rate (ton/yr) / 2,000 lb/ton]
Controlled PTE (lb/hr) = [Uncontrolled Emission Rate (lb/hr) x (1 - Control Efficiency)]
Controlled PTE (ton/yr) = [Uncontrolled Emission Rate (ton/yr) x (1-Control Efficiency)]
HAPs (lb/ton emission factor):
Uncontrolled PTE (lb/hr) = [Uncontrolled Emission Factor (lb/ton DDG) x Production Rate (ton/hr)]
Uncontrolled PTE (ton/yr) = [Uncontrolled Emission Factor (lb/ton DDG) x Production Rate (ton/yr) / 2,000 lb/ton]
Controlled PTE (lb/hr) = [Uncontrolled Emission Rate (lb/hr) x (1 - Control Efficiency)]
Controlled PTE (ton/yr) = [Uncontrolled Emission Rate (ton/yr) x (1-Control Efficiency)]
HAPs (lb/MMcf emission factor):
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
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Greenhouse Gas Calculations**

| | Greenhouse Gas | | |
|---|---|---|---|
| | CO2 | CH4 | N2O |
| Emission Factor in lb/MMcf | 120,000 | 2.3 | 2.2 |
| Potential Emission in tons/yr | 27,311 | 0.52 | 0.50 |
| Summed Potential Emissions in tons/yr | 27,312 | | |
| CO2e Total in tons/yr | 27,473 | | |

**Methodology**
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.
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 (298).

**Appendix A: Emissions Calculations**
**Wet Pad (EU-40)**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

| Emission Unit | Emission Point[a] | Uncontrolled Emission Factors[b] | | 0.0083 lb/ton wet cake | | 0.0001 lb/ton wet cake | | 0.00002 lb/ton wet cake | | 0.0002 lb/ton wet cake | | 0.00004 lb/ton wet cake | | Total HAP Emissions | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dryer Feed[c] | | VOC[d] | | Acetaldehyde[d] | | Acrolein[d] | | Formaldehyde[d] | | Methanol[d] | | | |
| | | (ton/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) |
| EU-40 | Wet Cake Production, Storage, and Loadout | 24.56 | 215,154 | 0.20 | 0.89 | 0.002 | 0.0108 | 0.0005 | 0.0022 | 0.005 | 0.022 | 0.001 | 0.0043 | 0.009 | 0.0387 |

Notes:

(a) VOC and HAP emissions can result during periods of dryer start-up and shutdown, when the dryer throughput may be diverted to a wet pad so that wet feed is not sent to dry storage.
(b) Emission factor for wet cake taken from a similar operation permitted in Indiana under Permit #T095-30443-00127 (POET Biorefining - Alexandria).
(c) Hourly dryer feed is maximum as taken from the material balance provided by ICM dated 1/30/2015.
(d) Methodology and Sample Calculations:
Emission rate (lb/hr) = Dryer Feed (ton/hr) X Wet Cake Emission factor (lb/ton)
Emission rate (ton/yr) = Dryer Feed (ton/yr) X Wet Cake Emission factor (lb/ton) x ton/2,000 lb

**Appendix A: Emissions Calculations**
**Summary of Emissions**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

**EU-41 through EU-43, EU-45, EU-61 Tanks and Bottling Operations**

| Source | Maximum Usage (PG/yr) | VOC Emission Factor (lb/1000 gal) | VOC Emissions (lb/hr) | VOC Emissions (ton/yr) |
|---|---|---|---|---|
| EU-41 (Wine Room) | 32,000,000 | 1.22 | 4.46 | 19.5 |
| EU-42 (Tank Farm) | 30,000,000 | 1.27 | 4.34 | 19.0 |
| EU-43 (Bldg 88) | 14,000,000 | 0.67 | 1.07 | 4.69 |
| EU-45 (Mini Tank Farm) | 10,000,000 | 0.718 | 0.82 | 3.59 |
| EU-61 (Whiskey System) | 13,000,000 | 0.95 | 1.41 | 6.18 |
| EU-61 (Gin System) | 12,775,000 | 0.913 | 1.33 | 5.83 |
| **Total** | | | **13.43** | **58.8** |

**Methodology:**

From Permit No. 24407: Emission Factors based on source estimates. No AP-42 or FIRE emission factors are available
Emissions (ton/yr) = Maximum usage (pg/yr)/1,000 x EF (lb/1,000 gal) / 2,000 lb/ton
Emissions (lb/hr) = Emissions (ton/yr) x 2,000 lb/ton / 8,760 hr/yr

**EU-71 through EU-76 Warehouse Emissions**

| Source | Emission Factor (lb/barrel/yr) | # Barrels | VOC Emissions (lb/yr) | VOC Emissions (ton/yr) |
|---|---|---|---|---|
| EU-71 through EU-76 | 6.9 | 541278 | 3,734,818 | 1,867 |

**Methodology:**

Emission factor taken from AP-42 Table 9.12.3-1
Emissions (ton/yr) = # barrels x EF (lb/barrel/yr) / 2,000 lb/ton

**Appendix A: Emissions Calculations**
**Rail Car and Truck Loading Emissions.**

**Company Name: MGPI of Indiana, LLC**
**Address: 7 Ridge Avenue, Lawrenceburg, Indiana 47025**
**Significant Source Modification No.: 029-35496-00005**
**Significant Permit Modification No.: 029-35505-00005**
**Reviewer: Kristen Willoughby**
**Date: 12/22/2014**

**EU-46 Rail Car and Truck Loading Emissions**

| Emission Point | Loading Properties[a] | | | | Throughput[b] |
|---|---|---|---|---|---|
| | Loading Temperature (F) | Loading Temperature (R) | Vapor Pressure (psi) | Vapor Molecular Weight (lb/lb-mol) | Annual (1,000 gal/yr) |
| Rail Car and Truck Loading | 62 | 521.67 | 0.689 | 46 | 29,450 |

| Emission Point | Saturation Factor[c] | Loading Loss[d] ($lb/10^3$ gal) | Uncontrolled Emissions[e] |
|---|---|---|---|
| | | | Annual (ton/yr) |
| Rail Car and Truck Loading | 0.6 | 0.454 | 6.69 |
| Total | | | 6.69 |

**Methodology:**

(a) Vapor pressure and molecular weight taken from the material property information for ethanol.
Antoine's Coefficients for ethanol: log P = A - [B/(T+C)]; P in bar, T in K

| | | |
|---|---|---|
| A = | 5.37229 | |
| B = | 1670.409 | |
| C = | -40.191 | |
| T = | 289.667 | K |
| P = | 0.047 | bar |
| P = | 0.689 | psi |

(b) Maximum annual production of: 31,000,000 gal/yr
Product proof: 190 proof
Product Ethanol concentration: 95%
Maximum annual Ethanol throughput: 29,450,000 gal/yr

(c) Saturation factor for submerged, dedicated loading taken from Section 5.2 of AP-42, Fifth Edition, Volume 1.

(d) Loading loss estimate calculated according to the methodology in Section 5.2 of AP-42, Fifth Edition, Volume 1.
Sample Calculation, average loading loss:

$L_L$ ($lb/10^3$ gal)= 12.46 SMP / T ; S = Saturation Factor (--)
M = Vapor Molecular Weight (lb/lb-mol)
P = Vapor Pressure (psi)
T = Loading Temperature (R)

$$L_L = \frac{(12.46)\ (0.6)\ (46\ \text{lb/lb-mol})\ (0.689\ \text{psi})}{521.67\ \text{R}} = 0.454\ \text{lb / 10}^3\ \text{gal}$$

(e) Emissions estimated by applying the loading loss to the applicable loading throughput.
sample calculation, annual emissions:

$$\frac{0.454\ \text{lb}}{1000\ \text{gal}} \cdot \frac{29{,}450\ \text{x}1{,}000\ \text{gal}}{\text{yr}} \cdot \frac{\text{ton}}{2{,}000\ \text{lb}} = 6.69\ \frac{\text{ton}}{\text{yr}}$$

| HAP | Product | HAP Fraction | Uncontrolled PTE HAP (ton/yr) |
|---|---|---|---|
| Acetaldehyde [1] | ethanol | 1.00E-03 | 6.69E-03 |
| Methanol [2] | ethanol | 5.00E-03 | 3.34E-02 |
| Formaldehyde [1] | ethanol | 1.00E-03 | 6.69E-03 |
| **Total** | | | **4.68E-02** |

1. Acetaldehyde and Formaldehyde are estimated to be at trace levels in ethanol. It will conservatively assume that these trace levels do not exceed 1000 ppm in the ethanol product.
2. Methanol concentration is based on maximum weight percent of 0.5% as per ASTM D 4806

Note: HAP emission rates based on performance tests at similar facilities.

**Appendix A: Emissions Calculations**
**Equipment Leak Fugitive Emissions**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

**EU-81 Equipment Leak Fugitive Emissions**

| Component | Count | Emission Factor (lb/hr/component) | % VOC | VOC Emissions (lb/hr) | VOC Emissions (ton/yr) |
|---|---|---|---|---|---|
| Pumps | 124 | 0.0439 | 60% | 3.27 | 14.31 |
| Valves | 4,481 | 0.0089 | 60% | 23.93 | 104.81 |
| Flanges | 6,940 | 0.0005 | 60% | 2.08 | 9.12 |
| | | | **Total** | **29.28** | **128.23** |

**Methodology:**

Component counts based on facility estimates. Counts exclude components within former bottling operation that are no longer owned or operated by MGPI of Indiana, LLC.
Average SOCMI emission factor, taken from "Protocol for Equipment Leak Emission Estimates", EPA-453/R-95-017, November 1995
Emissions (lb/hr) = # components x EF (lb/hr/component) x % VOC
Emissions (ton/yr) = Emissions (lb/hr) x 8,760 hr/yr / 2,000 lb/ton

**Total Fugitive VOCs (ton/yr)** **128.23**

| HAP | HAP Fraction | Fugitive HAP Emissions (tons/yr) |
|---|---|---|
| Acetaldehyde [1] | 1.00E-03 | 1.28E-01 |
| Methanol [2] | 5.00E-03 | 6.41E-01 |
| Formaldehyde [1] | 1.00E-03 | 1.28E-01 |
| **Total** | | **0.90** |

1. Acetaldehyde and Formaldehyde are estimated to be at trace levels in ethanol. It is conservatively assume that these trace levels do not exceed 1000 ppm in the ethanol product.

2. Methanol concentration is based on maximum weight percent of 0.5% as per ASTM D 4806

Fugitive HAP Emissions (tons/yr) = VOC (tons/yr) x HAP Fraction

**Appendix A: Emission Calculations**
**Natural Gas Combustion Only**
**Utility Boiler**
**Company Name: MGPI of Indiana, LLC**
**Address: 7 Ridge Avenue, Lawrenceburg, Indiana 47025**
**Significant Source Modification No.: 029-35496-00005**
**Significant Permit Modification No.: 029-35505-00005**
**Reviewer: Kristen Willoughby**
**Date: 12/22/2014**

| Heat Input Capacity MMBtu/hr | Potential Throughput MMCF/yr |
|---|---|
| 244.0 | 2095.5 |

| | Pollutant | | | | | | |
|---|---|---|---|---|---|---|---|
| | PM* | PM10* | direct PM2.5* | SO2 | NOx | VOC | CO |
| Emission Factor in lb/MMCF | 1.9 | 7.6 | 7.6 | 0.6 | 280.0 **see below | 5.5 | 84.0 |
| Potential Emission in tons/yr | 1.99 | 7.96 | 7.96 | 0.63 | 293.4 | 5.76 | 88.0 |

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
PM2.5 emission factor is condensable and filterable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 280 (pre-NSPS) or 190 (post-NSPS), Low NOx Burner = 140, Flue gas recirculation = 100 (See Table 1.4-1)

**Methodology**
All emission factors are based on normal firing.
MMBtu = 1,020,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-01-006-01, 1-01-006-04 (AP-42 Supplement D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

| | HAPs - Organics | | | | |
|---|---|---|---|---|---|
| | Benzene | Dichlorobenzene | Formaldehyde | Hexane | Toluene |
| Emission Factor in lb/MMcf | 2.1E-03 | 1.2E-03 | 7.5E-02 | 1.8E+00 | 3.4E-03 |
| Potential Emission in tons/yr | 2.20E-03 | 1.26E-03 | 7.86E-02 | 1.89E+00 | 3.56E-03 |

| | HAPs - Metals | | | | | |
|---|---|---|---|---|---|---|
| | Lead | Cadmium | Chromium | Manganese | Nickel | |
| Emission Factor in lb/MMcf | 5.0E-04 | 1.1E-03 | 1.4E-03 | 3.8E-04 | 2.1E-03 | Total HAPs |
| Potential Emission in tons/yr | 5.24E-04 | 1.15E-03 | 1.47E-03 | 3.98E-04 | 2.20E-03 | 1.98 |

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 | | |
|---|---|---|---|
| | CO2 | CH4 | N2O |
| Emission Factor in lb/MMcf | 120,000 | 2.3 | 2.2 |
| Potential Emission in tons/yr | 125,732 | 2.4 | 2.3 |
| Summed Potential Emissions in tons/yr | 125,736 | | |
| CO2e Total in tons/yr | 126,479 | | |

**Methodology**
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.
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 (298).

**Appendix A: Emission Calculations**
**Natural Gas Combustion Only**
**Utility Boiler**
**Company Name: MGPI of Indiana, LLC**
**Address: 7 Ridge Avenue, Lawrenceburg, Indiana 47025**
**Significant Source Modification No.: 029-35496-00005**
**Significant Permit Modification No.: 029-35505-00005**
**Reviewer: Kristen Willoughby**
**Date: 12/22/2014**

| Heat Input Capacity MMBtu/hr | HHV MMBtu/MMcf | Potential Throughput MMCF/yr |
|---|---|---|
| 47.6 | 1020 | 408.8 |

| Unrecognized Fuel Oil usage Heat Input Capacity MMBtu/yr | HHV MMBtu/MMcf | Potential Throughput MMCF/yr |
|---|---|---|
| 140736.0 | 1020 | 138.0 |

| | Pollutant | | | | | | |
|---|---|---|---|---|---|---|---|
| | PM* | PM10* | direct PM2.5* | SO2 | NOx | VOC | CO |
| Emission Factor in lb/MMCF | 1.9 | 7.6 | 7.6 | 0.6 | 100 **see below | 5.5 | 84 |
| Potential Emission in tons/yr | 0.39 | 1.55 | 1.55 | 0.12 | 20.4 | 1.12 | 17.2 |
| Potential Emissions from Unrecognized Fuel Oil consumption | 0.13 | 0.52 | 0.52 | 0.04 | 6.90 | 0.38 | 5.80 |

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**HAPS Calculations**

| | HAPs - Organics | | | | | |
|---|---|---|---|---|---|---|
| | Benzene | Dichlorobenzene | Formaldehyde | Hexane | Toluene | **Total - Organics** |
| Emission Factor in lb/MMcf | 2.1E-03 | 1.2E-03 | 7.5E-02 | 1.8E+00 | 3.4E-03 | |
| Potential Emission in tons/yr | 4.292E-04 | 2.453E-04 | 1.533E-02 | 3.679E-01 | 6.950E-04 | **3.846E-01** |

| | HAPs - Metals | | | | | |
|---|---|---|---|---|---|---|
| | Lead | Cadmium | Chromium | Manganese | Nickel | **Total - Metals** |
| Emission Factor in lb/MMcf | 5.0E-04 | 1.1E-03 | 1.4E-03 | 3.8E-04 | 2.1E-03 | |
| Potential Emission in tons/yr | 1.022E-04 | 2.248E-04 | 2.862E-04 | 7.767E-05 | 4.292E-04 | **1.120E-03** |
| | | | | | **Total HAPs** | **3.857E-01** |
| | | | | | **Worst HAP** | **3.679E-01** |

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 | | |
|---|---|---|---|
| | CO2 | CH4 | N2O |
| Emission Factor in lb/MMcf | 120,000 | 2.3 | 2.2 |
| Potential Emission in tons/yr | 24,528 | 0.5 | 0.4 |
| Summed Potential Emissions in tons/yr | 24,529 | | |
| CO2e Total in tons/yr | 24,674 | | |

**Methodology**
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.
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 (298).

**Appendix A: Emissions Calculations**
**Commercial/Institutional/Residential Combustors (< 100 MMBtu/hr)**
**#1 and #2 Fuel Oil**
**Company Name: MGPI of Indiana, LLC**
**Address: 7 Ridge Avenue, Lawrenceburg, Indiana 47025**
**Significant Source Modification No.: 029-35496-00005**
**Significant Permit Modification No.: 029-35505-00005**
**Reviewer: Kristen Willoughby**
**Date: 12/22/2014**

| Heat Input Capacity MMBtu/hr | Potential Throughput kgals/year | Limited Throughput kgals/yr | S = Weight % Sulfur |
|---|---|---|---|
| 45.6 | 2853.3 | 1848 | 0.3 |

| Unrecognized Fuel Oil usage (kgals/year) | Unrecognized Heat Input Capacity MMBtu/yr |
|---|---|
| 1005.3 | 140736.0 |

| | Pollutant | | | | | | |
|---|---|---|---|---|---|---|---|
| | PM* | PM10 | direct PM2.5 | SO2 | NOx | VOC | CO |
| Emission Factor in lb/kgal | 2.0 | 2.3 | 1.55 | 42.6 *(142.0S)* | 20.0 | 0.20 | 5.0 |
| Limited Emission Factor in lb/kgal | | | | 43.00 | | | |
| Potential Emission in tons/yr | 2.85 | 3.28 | 2.21 | 60.8 | 28.5 | 0.29 | 7.1 |
| Limited Emissions from fuel oil in tons/yr | 1.85 | 2.13 | 1.43 | 39.7 | 18.5 | 0.185 | 4.62 |

**Methodology**
1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu
Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu
Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, 1.3-3 and 1.3-6 (SCC 1-02-005-01/02/03) Supplement E 9/98 (see erata file)
*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

| | HAPs - Metals | | | | |
|---|---|---|---|---|---|
| | Arsenic | Beryllium | Cadmium | Chromium | Lead |
| Emission Factor in lb/MMBtu | 4.0E-06 | 3.0E-06 | 3.0E-06 | 3.0E-06 | 9.0E-06 |
| Potential Emission in tons/yr | 7.99E-04 | 5.99E-04 | 5.99E-04 | 5.99E-04 | 1.80E-03 |

| | HAPs - Metals (continued) | | | | |
|---|---|---|---|---|---|
| | Mercury | Manganese | Nickel | Selenium | |
| Emission Factor in lb/MMBtu | 3.0E-06 | 6.0E-06 | 3.0E-06 | 1.5E-05 | |
| Potential Emission in tons/yr | 5.99E-04 | 1.20E-03 | 5.99E-04 | 3.00E-03 | Total 9.8E-03 |

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

| | Greenhouse Gas | | |
|---|---|---|---|
| | CO2 | CH4 | N2O |
| Emission Factor in lb/kgal | 22,300 | 0.052 | 0.26 |
| Potential Emission in tons/yr | 31,814 | 0.1 | 0.4 |
| Summed Potential Emissions in tons/yr | 31,814 | | |
| CO2e Total in tons/yr | 31,926 | | |

**Methodology**
The CO2 Emission Factor for #1 Fuel Oil is 21500. The CO2 Emission Factor for #2 Fuel Oil is 22300.
Emission Factors are from AP 42, Tables 1.3-3, 1.3-8, and 1.3-12 (SCC 1-02-005-01/02/03) Supplement E 9/99 (see erata file)
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/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 (298).

**Appendix A: Emission Calculations**
**Large Reciprocating Internal Combustion Engines - Diesel Fuel**
**Emergency Generator**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

**B. Emissions calculated based on output rating (hp)**

| | |
|---|---|
| Output Horsepower Rating (hp) | 1600.0 |
| Maximum Hours Operated per Year | 500 |
| Potential Throughput (hp-hr/yr) | 800,000 |
| Sulfur Content (S) of Fuel (% by weight) | 0.500 |

| | Pollutant | | | | | | |
|---|---|---|---|---|---|---|---|
| | PM* | PM10* | direct PM2.5* | SO2 | NOx | VOC | CO |
| Emission Factor in lb/hp-hr | 7.00E-04 | 4.01E-04 | 4.01E-04 | 4.05E-03 *(.00809S)* | 2.40E-02 **see below | 7.05E-04 | 5.50E-03 |
| Potential Emission in tons/yr | 0.28 | 0.16 | 0.16 | 1.62 | 9.60 | 0.28 | 2.20 |

*PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

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

**Hazardous Air Pollutants (HAPs)**

| | Pollutant | | | | | | |
|---|---|---|---|---|---|---|---|
| | Benzene | Toluene | Xylene | Formaldehyde | Acetaldehyde | Acrolein | Total PAH HAPs*** |
| Emission Factor in lb/hp-hr**** | 5.43E-06 | 1.97E-06 | 1.35E-06 | 5.52E-07 | 1.76E-07 | 5.52E-08 | 1.48E-06 |
| Potential Emission in tons/yr | 2.17E-03 | 7.87E-04 | 5.40E-04 | 2.21E-04 | 7.06E-05 | 2.21E-05 | 5.94E-04 |

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

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

| | |
|---|---|
| **Potential Emission of Total HAPs (tons/yr)** | **4.41E-03** |

**Green House Gas Emissions (GHG)**

| | Pollutant | | |
|---|---|---|---|
| | CO2 | CH4 | N2O |
| Emission Factor in lb/hp-hr | 1.15E+00 | 4.62E-05 | 9.24E-06 |
| Potential Emission in tons/yr | 4.60E+02 | 1.85E-02 | 3.70E-03 |

| | |
|---|---|
| **Summed Potential Emissions in tons/yr** | **4.60E+02** |
| **CO2e Total in tons/yr** | **4.62E+02** |

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4.
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 (25) + N2O Potential Emission ton/yr x N2O GWP (298).

**Appendix A: Emission Calculations**
**Reciprocating Internal Combustion Engines - Natural Gas**
**2-Stroke Lean-Burn (2SLB) Engines**
**Company Name: MGPI of Indiana, LLC**
**Address: 7 Ridge Avenue, Lawrenceburg, Indiana 47025**
**Significant Source Modification No.: 029-35496-00005**
**Significant Permit Modification No.: 029-35505-00005**
**Reviewer: Kristen Willoughby**
**Date: 12/22/2014**

| | |
|---|---|
| Maximum Heat Input Capacity (MMBtu/hr) | 0.121 |
| Maximum Hours Operated per Year (hr/yr) | 500 |
| Potential Fuel Usage (MMBtu/yr) | 60.5 |
| High Heat Value (MMBtu/MMscf) | 1020 |
| Potential Fuel Usage (MMcf/yr) | 0.06 |

| | Pollutant | | | | | | |
|---|---|---|---|---|---|---|---|
| **Criteria Pollutants** | PM* | PM10* | PM2.5* | SO2 | NOx | VOC | CO |
| Emission Factor (lb/MMBtu) | 3.84E-02 | 4.83E-02 | 4.83E-02 | 5.88E-04 | 3.17E+00 | 1.20E-01 | 3.86E-01 |
| Potential Emissions (tons/yr) | 0.001 | 0.001 | 0.001 | 1.78E-05 | 0.10 | 0.004 | 0.01 |

*PM emission factor is for filterable PM-10. PM10 emission factor is filterable PM10 + condensable PM.
PM2.5 emission factor is filterable PM2.5 + condensable PM.

**Hazardous Air Pollutants (HAPs)**

| Pollutant | Emission Factor (lb/MMBtu) | Potential Emissions (tons/yr) |
|---|---|---|
| Acetaldehyde | 7.76E-03 | 2.35E-04 |
| Acrolein | 7.78E-03 | 2.35E-04 |
| Benzene | 1.94E-03 | 5.87E-05 |
| 1,3-Butadiene | 8.20E-04 | 2.48E-05 |
| Ethylbenzene | 1.08E-04 | 3.27E-06 |
| Formaldehyde | 5.52E-02 | 1.67E-03 |
| Methanol | 2.48E-03 | 7.50E-05 |
| Methylene Chloride | 1.47E-04 | 4.45E-06 |
| Hexane | 4.45E-04 | 1.35E-05 |
| Toluene | 9.63E-04 | 2.91E-05 |
| 2,2,4-Trimethylpentane | 8.46E-04 | 2.56E-05 |
| Total PAH** | 1.34E-04 | 4.05E-06 |
| | **Total** | **2.38E-03** |

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

**Methodology**
Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-1
Potential Fuel Usage (MMBtu/yr) = [Maximum Heat Input Capacity (MMBtu/hr)] * [Maximum Hours Operating per Year (hr/yr)]
Potential Emissions (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2000 lb/ton]

| | Greenhouse Gas (GHG) | | |
|---|---|---|---|
| **Greenhouse Gases (GHGs)** | CO2 | CH4 | N2O |
| Emission Factor in lb/MMBtu* | 110 | 1.25 | |
| Emission Factor in lb/MMcf** | | | 2.2 |
| Potential Emission in tons/yr | 3.33 | 0.04 | 0.00 |
| Summed Potential Emissions in tons/yr | 3.37 | | |
| CO2e Total in tons/y | 4.29 | | |

**Methodology**
*The CO2 and CH4 emission factors are from Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-2
**The N2O emission factor is from AP 42, Table 1.4-2. The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low NOx burner is 0.64.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
For CO2 and CH4: Emission (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]
For N2O: Emission (tons/yr) = [Potential Fuel Usage (MMCF/yr)] * [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 (298).

**Abbreviations**
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
VOC - Volatile Organic Compounds
CO = Carbon Monoxide
CO2 = Carbon Dioxide
CH4 = Methane
N2O = Nitrous Oxide
CO2e = CO2 equivalent emissions

**Appendix A: Emission Calculations**
**Reciprocating Internal Combustion Engines - Diesel Fuel**
**Output Rating (<=600 HP)**
**Maximum Input Rate (<=4.2 MMBtu/hr)**

**Company Name:** **MGPI of Indiana, LLC**
**Address:** **7 Ridge Avenue, Lawrenceburg, Indiana 47025**
**Significant Source Modification No.:** **029-35496-00005**
**Significant Permit Modification No.:** **029-35505-00005**
**Reviewer:** **Kristen Willoughby**
**Date:** **12/22/2014**

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

| | |
|---|---|
| Output Horsepower Rating (hp) | 235.0 |
| Maximum Hours Operated per Year | 500 |
| Potential Throughput (hp-hr/yr) | 117,500 |
| Sulfur Content (S) of Fuel (% by weight) | 0.500 |

| | Pollutant | | | | | | |
|---|---|---|---|---|---|---|---|
| | PM* | PM10* | direct PM2.5* | SO2 | NOx | VOC | CO |
| Emission Factor in lb/hp-hr | 2.20E-03 | 2.20E-03 | 2.20E-03 | 2.05E-03 | 3.10E-02 | 2.51E-03 | 6.68E-03 |
| Potential Emission in tons/yr | 0.13 | 0.13 | 0.13 | 0.12 | 1.82 | 0.15 | 0.39 |

*PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).
**NOx emission factor: uncontrolled = 0.024 lb/hp-hr, controlled by ignition timing retard = 0.013 lb/hp-hr

**Hazardous Air Pollutants (HAPs)**

| | Pollutant | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Benzene | Toluene | Xylene | 1,3-Butadiene | Formaldehyde | Acetaldehyde | Acrolein | Total PAH HAPs*** |
| Emission Factor in lb/hp-hr**** | 6.53E-06 | 2.86E-06 | 2.00E-06 | 2.74E-07 | 8.26E-06 | 5.37E-06 | 6.48E-07 | 1.18E-06 |
| Potential Emission in tons/yr | 3.84E-04 | 1.68E-04 | 1.17E-04 | 1.61E-05 | 4.85E-04 | 3.15E-04 | 3.80E-05 | 6.91E-05 |

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

| | |
|---|---|
| **Potential Emission of Total HAPs (tons/yr)** | **1.59E-03** |

**Green House Gas Emissions (GHG)**

| | Pollutant | | |
|---|---|---|---|
| | CO2 | CH4 | N2O |
| Emission Factor in lb/hp-hr | 1.15E+00 | 4.62E-05 | 9.24E-06 |
| Potential Emission in tons/yr | 6.76E+01 | 2.71E-03 | 5.43E-04 |

| | |
|---|---|
| **Summed Potential Emissions in tons/yr** | **6.76E+01** |
| **CO2e Total in tons/yr** | **6.78E+01** |

**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 (25) + N2O Potential Emission ton/yr x N2O GWP (298).

**Appendix B: Emissions Calculations**
**Summary of Modification**

**Company Name:** MGPI of Indiana, LLC

**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025

**Significant Source Modification No.:** 029-35496-00005

**Significant Permit Modification No.:** 029-35505-00005

**Reviewer:** Kristen Willoughby

**Date:** 12/22/2014

| Uncontrolled Potential to Emit (tons/yr) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Emission Unit** | **PM** | **PM10** | **PM2.5 *** | **$SO_2$** | **NOx** | **VOC** | **CO** | **Total HAPs** |
| One (1) DDG Dryer, identifed as EU-39 | 418.77 | 418.77 | 418.77 | 18.84 | 27.86 | 418.77 | 464.28 | 39.36 |
| Wet Pad (EU-40) | - | - | - | - | - | 0.89 | - | 0.04 |
| 2 Screw Conveyors, 1 Drag Conveyor, 3 Product Conveyors, 1 K-Valve | 2.55 | 1.42 | 0.24 | - | - | - | - | - |
| **Total** | **421.32** | **420.19** | **419.01** | **18.84** | **27.86** | **419.66** | **464.28** | **39.40** |

** PM2.5 listed is direct PM2.5*

**Appendix B: Emissions Calculations**
**Summary of Emissions**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/14

| | Emissions (ton/yr) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Process/Emission Unit** | **PM** | **PM10** | **PM2.5** | **SO2** | **NOx** | **VOC** | **CO** | **GHG** |
| *PTE (New Units)* | | | | | | | | |
| DDG Dryer (EU-39) | 8.38 | 8.38 | 8.38 | 18.84 | 27.86 | 8.38 | 46.43 | 27,473 |
| Wet Pad (EU-40) | - | - | - | - | - | 0.89 | - | - |
| **PTE** | **8.38** | **8.38** | **8.38** | **18.84** | **27.86** | **9.27** | **46.43** | **27,473** |
| *Actual to Potential (DDG Cooler and Transport System EU-32)* | | | | | | | | |
| Baseline | 0.00 | 0.00 | 0.00 | - | - | 0.00 | - | - |
| PTE | 7.91 | 5.01 | 2.01 | - | - | 9.16 | - | - |
| **Emissions Increase (ATPA)** | **7.91** | **5.01** | **2.01** | **-** | **-** | **9.16** | - | - |
| *Actual to Projected Actual (EU-32 Rotary Dryers)* | | | | | | | | |
| Baseline | 21.45 | 21.45 | 21.45 | - | - | 635.51 | - | - |
| Projected Actuals | 19.85 | 19.85 | 19.85 | - | - | 587.94 | - | - |
| **Emissions Increase (ATPA)** | **<0** | **<0** | **<0** | **-** | **-** | **<0** | - | - |
| *Hybrid Test* | | | | | | | | |
| Total PTE New Units | 8.38 | 8.38 | 8.38 | 18.84 | 27.86 | 9.27 | 46.43 | 27,473 |
| Total Emissions Increase from ATPA | 7.91 | 5.01 | 2.01 | - | - | 9.16 | - | - |
| **Hybrid Test Emissions Increase** | **16.29** | **13.38** | **10.39** | **18.84** | **27.86** | **18.42** | **46.43** | **27472.88** |
| **PSD Significant Threshold** | **25** | **15** | **10** | **40** | **40** | **40** | **100** | **75,000** |

| **PM2.5 Net Emissions (ton/yr)** | |
|---|---|
| Hybrid Test increase | **10.39** |
| *Contemporaneous Netting* | |
| EU-32 Rotary Dryers - Baseline | 21.45 |
| EU-32 Rotary Dryers - Projected Actuals | 19.85 |
| Contenporanous Decrease - EU-32 Rotary Dryers | **-1.61** |
| *AA 029-32386-00005 (issued 12/17/12) - add 3 boilers* | |
| 3 Boilers - Baseline | 0.00 |
| 3 Boilers - Projected Actual (PTE) | 0.41 |
| Contemperaneous Increases from 3 Boilers | **0.41** |
| *Renewal T029-32119-00005 (issued 06/20/14) - remove 3 boilers* | |
| 3 Boilers - Baseline (PTE) | 0.41 |
| 3 Boilers - PTE | 0.00 |
| Projected Decrease from 3 Boilers | **-0.41** |
| **Emissions Increase** | 8.78 |
| **PSD Significant Threshold** | 10 |

Note: Baseline emissions for the DDG Cooler and Transport System are assumed to be zero. The transport system has new units being added.
MGPI's production is bottlenecked at the existing stills which are not being modified. Any increase in production could have been accommodated with the existing dryers.
Pursuant to 326 IAC 2-2(e)(3), the baseline emissions for a new emissions unit after intial construction shall be equal to the PTE. Pursuant to 326 IAC 2-2(t)(1), a new emissions unit is any emissions unit that has exisited less than 2 years.

**Appendix B: Emissions Calculations**
**DDG Dryer (EU-39)**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

| Combustion Source | Hourly MMBtu/hr | Annual MMBtu/yr | Heat Content (Btu/scf) | Fuel Usage (MMcf/yr) |
|---|---|---|---|---|
| Direct-fired Dryer Heat Input Capacity[a] | 45 | 394,200 | 1,020 | 386.47 |
| RTO Heat Input Capacity[a] | 8 | 70,080 | 1,020 | 68.71 |
| Total Heat Input Capacity | 53 | 464,280 | | 455.18 |

| Production Capacity | ton/hr | ton/yr |
|---|---|---|
| Short-term Distiller's Dry Grain (DDG) Production[b] | 9.56 | 83,754 |

| Control Efficiency For Criteria Emissions (% Removal)[c] | Pollutant | Control Efficiency |
|---|---|---|
| | HAPs | 97% |
| | VOC | 98% |
| | CO | 90% |
| | $PM/PM_{10}/PM_{2.5}$ | 98% |

| Emissions From DDG Drying (EU-39) | Pollutant | NOx | | CO | | $SO_2$ | | VOC | | PM | | $PM_{10}$ | | $PM_{2.5}$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Uncontrolled Emission Factor | 0.12 lbs/MMBtu | | 2.0 lbs/MMBtu | | 0.45 lbs/ton DDG | | 10.0 lbs/ton DDG | | 10.0 lbs/ton DDG | | 10.0 lbs/ton DDG | | 10.0 lbs/ton DDG | |
| | Units | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy |
| Uncontrolled PTE | | 6.36 | 27.86 | 106.00 | 464.28 | 4.30 | 18.84 | 95.61 | 418.77 | 95.61 | 418.77 | 95.61 | 418.77 | 95.61 | 418.77 |
| Controlled PTE | | - | - | 10.60 | 46.43 | - | - | 1.91 | 8.38 | 1.91 | 8.38 | 1.91 | 8.38 | 1.91 | 8.38 |

| HAP Emissions From DDG Drying (EU-39) | Pollutant | Acetaldehyde | | Formaldehyde | | Acrolein | | Methanol | | Total HAP (from Natural Gas Combustion) | | Total HAP Emissions[e] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Uncontrolled Emission Factors[c] | 0.5 lbs/ton DDGS | | 0.31 lbs/ton DDGS | | 0.01 lbs/ton DDGS | | 0.11 lbs/ton DDGS | | See Below | | | |
| | Units | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy | lbs/hr | tpy |
| Uncontrolled PTE | | 4.78 | 20.94 | 2.96 | 12.98 | 0.10 | 0.42 | 1.05 | 4.61 | 0.09 | 0.41 | 8.99 | 39.36 |
| Controlled PTE | | 0.14 | 0.63 | 0.09 | 0.39 | 0.00 | 0.01 | 0.03 | 0.14 | 2.82E-03 | 0.01 | 0.27 | 1.18 |

| | Combustion HAPs - Organics | | | | | |
|---|---|---|---|---|---|---|
| Emission Factor in lb/MMcf | Benzene 2.1E-03 | Dichlorobenze 1.2E-03 | Formaldehyde Included Above | Hexane 1.8E+00 | Toluene 3.4E-03 | **Total - Organics** |
| Potential Emission in tons/yr | 4.779E-04 | 2.731E-04 | | 4.097E-01 | 7.738E-04 | **4.112E-01** |

| | Combustion HAPs - Metals | | | | | |
|---|---|---|---|---|---|---|
| Emission Factor in lb/MMcf | Lead 5.0E-04 | Cadmium 1.1E-03 | Chromium 1.4E-03 | Manganese 3.8E-04 | Nickel 2.1E-03 | **Total - Metals** |
| Potential Emission in tons/yr | 1.138E-04 | 2.503E-04 | 3.186E-04 | 8.648E-05 | 4.779E-04 | **1.247E-03** |

**Appendix B: Emissions Calculations**
**DDG Dryer (EU-39)**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

**Notes:** Design heat inputs of direct fired dryer and of thermal oxidizer provided by the manufacturer (ICM, Inc.).

(a) Maximum short-term distiller's dry grain (DDG) production rate taken from facility information. Capacity of proposed system will be equivalent to combined capacity of the existing steam-tube dryers (portion of existing EU-32). Material balance is as follows:

(b)

| | (lb/hr) | %solids |
|---|---|---|
| Dryer feed | 35,508 | 35.5% |
| Water / Evaporation | 21,508 | 0% |
| DDG Production | 14,000 | 90% |

Annual operations assume that the proposed dryer will operate at capacity continuously throughout the year.

Dryer uncontrolled emission factors and cyclone/thermal oxidizer control efficiencies provided by the manufacturer (ICM, Inc.). Assume $PM/PM_{10}$ emissions are equivalent. Under the Part 70 Permit Program

(c) Dryer uncontrolled emission factors and thermal oxidizer control efficiencies provided by the manufacturer (ICM, Inc.). Emission factors for specific HAPs include both process emissions from the DDG drying operations and natural gas combustion emissions occurring within the direct-fired dryer. Emission factors include emissions form the screws, conveyors and agitator mixer leading to the dryer.

Methodology:

(d) NOx and CO:
Uncontrolled PTE (lb/hr) = [Uncontrolled Emission Factor (lb/MMBtu) x Design Firing Rate (MMBtu/hr)]
Uncontrolled PTE (ton/yr) = [Uncontrolled Emission Factor (lb/MMBtu) x Design Firing Rate (MMBtu/yr) / 2,000 lb/ton]
SO2:
Uncontrolled PTE (lb/hr) = [Uncontrolled Emission Factor (lb/ton DDG) x Production Rate (ton/hr)]
Uncontrolled PTE (ton/yr) = [Uncontrolled Emission Factor (lb/ton DDG) x Production Rate (ton/yr) / 2,000 lb/ton]
VOC, PM/PM10/PM2.5:
Uncontrolled PTE (lb/hr) = [Uncontrolled Emission Factor (lb/ton DDG) x Production Rate (ton/hr)]
Uncontrolled PTE (ton/yr) = [Uncontrolled Emission Factor (lb/ton DDG) x Production Rate (ton/yr) / 2,000 lb/ton]
Controlled PTE (lb/hr) = [Uncontrolled Emission Rate (lb/hr) x (1 - Control Efficiency)]
Controlled PTE (ton/yr) = [Uncontrolled Emission Rate (ton/yr) x (1-Control Efficiency)]
HAPs (lb/ton emission factor):
Uncontrolled PTE (lb/hr) = [Uncontrolled Emission Factor (lb/ton DDG) x Production Rate (ton/hr)]
Uncontrolled PTE (ton/yr) = [Uncontrolled Emission Factor (lb/ton DDG) x Production Rate (ton/yr) / 2,000 lb/ton]
Controlled PTE (lb/hr) = [Uncontrolled Emission Rate (lb/hr) x (1 - Control Efficiency)]
Controlled PTE (ton/yr) = [Uncontrolled Emission Rate (ton/yr) x (1-Control Efficiency)]
HAPs (lb/MMcf emission factor):
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
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Greenhouse Gas Calculations**

| | Greenhouse Gas | | |
|---|---|---|---|
| | CO2 | CH4 | N2O |
| Emission Factor in lb/MMcf | 120,000 | 2.3 | 2.2 |
| Potential Emission in tons/yr | 27,311 | 0.52 | 0.50 |
| Summed Potential Emissions in tons/yr | 27,312 | | |
| CO2e Total in tons/yr | 27,473 | | |

**Methodology**
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.
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 (298).

**Appendix B: Emissions Calculations**
**Wet Pad (EU-40)**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

| Emission Unit | Emission Point[a] | Uncontrolled Emission Factors[b] | | 0.0083 lb/ton wet cake | | 0.0001 lb/ton wet cake | | 0.00002 lb/ton wet cake | | 0.0002 lb/ton wet cake | | 0.00004 lb/ton wet cake | | Total HAP Emissions | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dryer Feed[c] | | VOC[d] | | Acetaldehyde[d] | | Acrolein[d] | | Formaldehyde[d] | | Methanol[d] | | | |
| | | (ton/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) |
| EU-40 | Wet Cake Production, Storage, and Loadout | 24.56 | 215,154 | 0.20 | 0.89 | 0.002 | 0.0108 | 0.0005 | 0.0022 | 0.005 | 0.022 | 0.001 | 0.0043 | 0.009 | 0.0387 |

Notes:

(a) VOC and HAP emissions can result during periods of dryer start-up and shutdown, when the dryer throughput may be diverted to a wet pad so that wet feed is not sent to dry storage.
(b) Emission factor for wet cake taken from a similar operation permitted in Indiana under Permit #T095-30443-00127 (POET Biorefining - Alexandria).
(c) Hourly dryer feed is maximum as taken from the material balance provided by ICM dated 1/30/2015.
(d) Methodology and Sample Calculations:
Emission rate (lb/hr) = Dryer Feed (ton/hr) X Wet Cake Emission factor (lb/ton)
Emission rate (ton/yr) = Dryer Feed (ton/yr) X Wet Cake Emission factor (lb/ton) x ton/2,000 lb

**Appendix B: Emissions Calculations**
**DDG Cooler and Transport System Projected Emission Estimates (EU-32)**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

| Emission Unit | Emission Point | Description | Stack ID | Uncontrolled PM Emission Factor | Uncontrolled $PM_{10}$ Emission Factor | Uncontrolled $PM_{2.5}$ Emission Factor | DDG throughput | | Uncontrolled PM Emission Rate | | Uncontrolled $PM_{10}$ Emission Rate | | Uncontrolled $PM_{2.5}$ Emission Rate | | Controlled PM Emission Rate | | Controlled $PM_{10}$ Emission Rate | | Controlled $PM_{2.5}$ Emission Rate | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (lb/ton) | (lb/ton) | (lb/ton) | (ton/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) |
| EU-32 | 4 Screw Conveyors, 2 Drag Conveyors, 3 Product Conveyors, 1 K-Valve | Grain Conveying | S-310 | 0.061 | 0.034 | 0.0058 | 9.56 | 83,754 | 0.58 | 2.55 | 0.33 | 1.42 | 0.06 | 0.24 | 0.09 | 0.38 | 0.05 | 0.21 | 0.01 | 0.04 |
| | Drum Cooler | Grain Conveying | NA | 0.061 | 0.034 | 0.0058 | | | 0.58 | 2.55 | 0.33 | 1.42 | 0.06 | 0.24 | 0.58 | 2.55 | 0.33 | 1.42 | 0.06 | 0.24 |
| | | | | | | | | **Totals** | **1.17** | **5.11** | **0.65** | **2.85** | **0.11** | **0.49** | **0.67** | **2.94** | **0.37** | **1.64** | **0.06** | **0.28** |

| Emission Unit | Emission Point | Description | Stack ID | Controlled PM Emission Factor | Controlled $PM_{10}$ Emission Factor | Controlled $PM_{2.5}$ Emission Factor | DDG throughput | | Controlled PM Emission Rate | | Controlled $PM_{10}$ Emission Rate | | Controlled $PM_{2.5}$ Emission Rate | | Uncontrolled PM Emission Rate | | Uncontrolled $PM_{10}$ Emission Rate | | Uncontrolled $PM_{2.5}$ Emission Rate | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (lb/ton) | (lb/ton) | (lb/ton) | (ton/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) |
| EU-32 | Hammer Mill | Hammer Milling[(b)] | S-310 | 0.067 | 0.052 | 0.036 | 9.56 | 83,754 | 0.64 | 2.81 | 0.49 | 2.16 | 0.35 | 1.53 | 12.81 | 56.12 | 9.86 | 43.17 | 1.74 | 7.64 |
| | | | | | | | | **Totals** | **0.64** | **2.81** | **0.49** | **2.16** | **0.35** | **1.53** | **12.81** | **56.12** | **9.86** | **43.17** | **1.74** | **7.64** |

**Methodology:**

(a) Factors taken from AP-42, Fifth Edition, Volume 1, Section 9.9.1 (Grain Elevators and Processes).
Controlled milling factor is taken from AP-42, Table 9.9.1-1, which accounts for cyclone controls in place on DDG cooling system. Uncontrolled emissions for hammermill is calculated assuming that the cyclone achieves 80% PM2.5 control and 85% PM/PM10 control.

(b) As recommended by AP-42 Appendix B.2, Table B.2.2 for Category 7 - "Grain Processing" on Page 17, the particle size distribution for $PM_{10}$ is 61% of Total PM and for $PM_{2.5}$ is 23% of Total PM for uncontrolled emissions. Additionally, AP-42 Appendix B.2, Table B.2.3 "Typical Collection Efficiencies of Various Particulate Control Devices" states that for high efficiency centrifugal collectors, the collection efficiency is 80% for $PM_{2.5}$ and 95% for $PM_{10}$. The size distribution of controlled PM emissions is calculated as presented below:

| **PM Size Range** | Uncontrolled wt% | Collection Efficiency | Controlled Wt | Controlled wt% |
|---|---|---|---|---|
| $PM_{2.5}$ | 23% | 80% | 0.046 | 54% |
| $PM_{2.5}$ to $PM_{10}$ | 38% | 95% | 0.019 | 22% |
| $PM_{10}$ and higher | 39% | 95% | 0.0195 | 23% |
| | 1 | | 0.0845 | |
| | | Overall control: | 91.6% | |

(c) Methodology:
Uncontrolled PTE (lb/hr) = [Uncontrolled Emission Factor (lb/ton DDG) x Production Rate (ton/hr)]
Uncontrolled PTE (ton/yr) = [Uncontrolled Emission Factor (lb/ton DDG) x Production Rate (ton/yr) / 2,000 lb/ton]
Controlled PTE Hammermill (lb/hr) = [Controlled Emission Factor (lb/ton DDG) x Production Rate (ton/hr)]
Controlled PTE Hammermill (ton/yr) = [Controlled Emission Factor (lb/ton DDG) x Production Rate (ton/yr) / 2,000 lb/ton]
Uncontrolled PTE PM2.5 Hammermill (lb/hr) = Controlled PTE Hammermill (lb/hr) / (1 - 80%)
Uncontrolled PTE PM/PM10 Hammermill (lb/hr) = Controlled PTE Hammermill (lb/hr) / (1 - 95%)
Uncontrolled PTE PM2.5 Hammermill (ton/yr) = Controlled PTE Hammermill (ton/yr) / (1 - 80%)
Uncontrolled PTE PM/PM10 Hammermill (ton/yr) = Controlled PTE Hammermill (ton/yr) / (1 - 95%)

**Appendix B: Emissions Calculations**
**DDG Cooler and Transport System Projected Emission Estimates (EU-32)**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

| Emission Unit | Emission Point | Description | Uncontrolled Emission Factors[(a)] DDG throughput | | 0.219 lb/ton DDG VOC | | 0.016 lbs/ton DDG Acetaldehyde | | 0.00033 lbs/ton DDG Acrolein | | 0.010 lbs/ton DDG Formaldehyde | | 0.0036 lbs/ton DDG Methanol | | Total HAP Emissions | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | (ton/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) | (lb/hr) | (ton/yr) |
| EU-32 | Drum Cooler | Cooling Drum Apparatus | 9.56 | 83,754 | 2.09 | 9.16 | 0.16 | 0.69 | 0.0031 | 0.014 | 0.10 | 0.43 | 0.034 | 0.15 | 0.292 | 1.28 |
| | Existing Screw Conveyor | Grain Conveying | | | | | | | | | | | | | | |
| | New 3 Screw Conveyors, 2 Drag Conveyors, 3 Product Conveyors, 1 K-Valve | Grain Conveying | | | | | | | | | | | | | | |
| | Existing Hammer Mill and Cyclone | Hammer Milling | | | | | | | | | | | | | | |

**Methodology:**

(a) VOC emission factor for DDG cooling taken from a similar operation permitted in Indiana under Permit #T169-31191-00068 (POET Biorefining - North Manchester). HAP emission factors are derived as a percentage of the VOC emission factor presented, assuming that individual HAPs are emitted in the same proportion from cooling as from the drying emissions provided in PTE calculations for DDG Dryer EU-39.

(b) Methodology:
Emission rate (lb/hr) = DDG Throughput (ton/hr) X DDG Cooling Emission factor (lb/ton)
Emission rate (ton/yr) = DDG Throughput (ton/yr) X DDG Cooling Emission factor (lb/ton) x ton/2,000 lb

Dryer emissions

| | tpy from Drying | % of VOC |
|---|---|---|
| VOC | 8.38 | -- |
| Acetaldehyde | 0.63 | 7.50% |
| Acrolein | 0.01 | 0.15% |
| Formaldehyde | 0.39 | 4.65% |
| Methanol | 0.14 | 1.65% |

Other DDG Cooler Emission Factors
POET Biorefining - N Manchester

| | | |
|---|---|---|
| 5.685 | lb VOC/hr | From June 2004 testing at POET-Biorefining Jewell (IA) |
| 26 | ton DDG/hr | |
| 0.21865385 | lb VOC / ton DDG | |

**Appendix B: Emissions Calculations**
**EU-32 Rotary Dryer Baseline Emissions**

**Company Name: MGPI of Indiana, LLC**
**Address: 7 Ridge Avenue, Lawrenceburg, Indiana 47025**
**Significant Source Modification No.: 029-35496-00005**
**Significant Permit Modification No.: 029-35505-00005**
**Reviewer: Kristen Willoughby**
**Date: 12/22/2014**

**EU-32 Rotary Dryers**

**PM, $PM_{10}$, $PM_{2.5}$ Emissions**

| Constituent | Dryer Feed Rate[(a)] (ton/yr) | Controlled Emission Factor[(b)] (lb/ton) | Controlled Emissions[(c)] (ton/yr) |
|---|---|---|---|
| PM | 158,894 | 0.27 | 21.45 |
| PM10 | | 0.27 | 21.45 |
| PM2.5 | | 0.27 | 21.45 |

Notes:
(a) Feed (wet cake) into existing steam tube dryer system is taken from facility records as the average over the 24-month period from January 2013 - December 2014.
(b) Controlled emission Factor from AP-42, Table 9.9.7-1. The emission estimation methodology used matches that provided in the IDEM document "Addendum to the Technical Support Document (ATSD) for a Part 70 Operating Permit Renewal", Appendix A Emission Calculations, dated May 22, 2014, for permit T029-32119-00005.
(c) Methodology:
Controlled Emissions (ton/yr) = Usage (ton/yr) x EF (lb/ton) / 2,000 lb/ton
PM2.5 emissions conservatively assumed to be equal to PM10 emissions.

**VOC Emissions**

| Dryer Feed Rate (ton/yr) | Water Content[(b)] (% by wt) | VOC Content of Water[(b)] (lb VOC/lb water) | VOC from Dryers (ton/yr) |
|---|---|---|---|
| 158,894 | 66.66% | 0.006 | 635.51 |

Notes:
(a) Feed (wet cake) into existing steam tube dryer system is taken from facility records as the average over the the 24-month period from January 2012 - December 2013.
(b) Water content (% wt) and VOC content of water (lb VOC/lb water) taken from May 22, 2014 ATSD, Appendix A, Page 8 of 23, for permit T029-32119-00005.
(c) Methodology and Sample Calculations:
VOC (ton/yr) = Dryer Feed Rate (ton/yr) x Water Content of Feed (% by wt) x (lb VOC/lb water)

**Appendix B: Emissions Calculations**
**EU-32 Rotary Dryer Projected Actual Emissions**

**Company Name:** MGPI of Indiana, LLC
**Address:** 7 Ridge Avenue, Lawrenceburg, Indiana 47025
**Significant Source Modification No.:** 029-35496-00005
**Significant Permit Modification No.:** 029-35505-00005
**Reviewer:** Kristen Willoughby
**Date:** 12/22/2014

**EU-32 Steam Tube Rotary Dryers**

**PM, $PM_{10}$, $PM_{2.5}$ Emissions**

| Constituent | Dryer Feed Rate[(a)] (ton/yr) | Controlled Emission Factor[(b)] (lb/ton) | Controlled Emissions[(c)] (ton/yr) | Uncontrolled Emissions[(d)] (ton/yr) |
|---|---|---|---|---|
| PM | 147,000 | 0.27 | 19.8 | 132.3 |
| PM10 | | 0.27 | 19.8 | 132.3 |
| PM2.5 | | 0.27 | 19.8 | 132.3 |

Notes:
(a) Feed (wet cake) into existing steam tube dryer system is based on operation as back-up to the proposed direct-fired dryer.
(b) Controlled emission Factor from AP-42, Table 9.9.7-1. The emission estimation methodology used matches that provided in the IDEM document "Addendum to the Technical Support Document (ATSD) for a Part 70 Operating Permit Renewal", Appendix A Emission Calculations, dated May 22, 2014, for permit T029-32119-00005.
(c) Methodology:
Controlled Emissions (ton/yr) = Usage (ton/yr) x EF (lb/ton) / 2,000 lb/ton
PM2.5 emissions conservatively assumed to be equal to PM10 emissions.
(d) Uncontrolled emissions estimated based on an 85% control efficiency for controlled emissions.
$PM_{2.5}$ emissions conservatively assumed to be equal to $PM_{10}$ emissions.

**VOC Emissions**

| Dryer Feed Rate (ton/hr) | Water Content[(b)] (% by wt) | VOC Content of Water[(b)] (lb VOC/lb water) | VOC from Dryers (ton/yr) |
|---|---|---|---|
| 147,000 | 66.66% | 0.006 | 587.9 |

Notes:
(a) Feed (wet cake) into existing steam tube dryer system is based on operation as back-up to the proposed direct-fired dryer.
(b) Water content (% wt) and VOC content of water (lb VOC/lb water) taken from May 22, 2014 ATSD, Appendix A, Page 8 of 23, for permit T029-32119-00005.
(c) Methodology:
VOC (ton/yr) = Dryer Feed Rate (ton/yr) x Water Content of Feed (% by wt) x (lb VOC/lb water)

**HAP Emissions**

| HAP | HAP%[(a)] (by wt of VOC) | HAP from Dryers (ton/yr) |
|---|---|---|
| Acetaldehyde | 6.18% | 36.3 |
| Acrolein | 0.37% | 2.2 |
| Methanol | 1.24% | 7.3 |
| Formaldehyde | 0.04% | 0.2 |
| Total | | 46.0 |

Notes:
(a) HAP composition taken from May 22, 2014 ATSD, Appendix A, Page 8 of 23, for permit T029-32119-00005.

# Appendix C

## CONTROL TECHNOLOGY 326 IAC 8-1-6 BACT ANALYSIS

## MGPI of Indiana

**Source Background and Description**

| | |
|---|---|
| **Source Name:** | **MGPI of Indiana** |
| **Source Location:** | **7 Ridge Ave., Lawrenceburg, IN 47025** |
| **County:** | **Dearborn** |
| **SIC Code:** | **2085** |
| **Significant Source Modification No.:** | **029-35496-00005** |
| **Significant Permit Modification No.:** | **029-35505-00005** |
| **Permit Reviewer:** | **Kristen Willoughby** |

On February 23, 2015, MGPI of Indiana submitted an application to the OAQ requesting the construction of a new DDG dryer.

The proposed modification is subject to 326 IAC 8-1-6 (BACT) review for VOC because the new DDG dryer has a potential to emit of VOC greater than or equal to 25 tons per year.

The BACT analysis submitted by MGPI of Indiana, which has been reviewed and analyzed by IDEM, OAQ, is based on the draft "Top-Down approach: BACT Guidance" published by USEPA, Office of Air Quality Planning Standards, March 15, 1990. The BACT analysis has been based on the following sources of information which have been reviewed or contacted:

(a) Downloadable USEPA RACT/BACT/LAER Clearinghouse (RBLC) System;
(b) USEPA/State/Local Air Quality Permits;
(c) Federal/State/Local Permit Engineers;
(d) Control Technology Vendors; and
(e) Inspection/Performance Test Reports.
(f) OAQPS Control Cost Manual.

**BACT Definition and Applicability**

Federal guidance on BACT requires an evaluation that follows a "top down" process. In this approach, the applicant identifies the best-controlled similar source on the basis of controls required by the regulation or the permit, or the controls achieved in practice. The highest level of the control is then evaluated for technical feasibility.

The five basic steps of a top-down BACT analysis are listed below:

**Step 1: Identify Potential Control Technologies**

The first step is to identify potentially "available" control options for each emission unit and for each pollutant under review. Available options should consist of a comprehensive list of those technologies with a potentially practical application to the emissions unit in question. The list should include lowest achievable emission rate (LAER) technologies, innovative technologies and controls applied to similar source categories.

**Step 2: Eliminate Technically Infeasible Options**

The second step is to eliminate technically infeasible options from further consideration. To be considered feasible, a technology must be both available and applicable. It is important in this step

that any presentation of a technical argument for eliminating a technology from further consideration be clearly documented based on physical, chemical, engineering and source-specific factors related to safe and successful use of the controls.

**Step 3: Rank The Remaining Control Technologies By Control Effectiveness**

The third step is to rank the technologies not eliminated in Step 2 in order of descending control effectiveness for each pollutant of concern. If the highest ranked technology is proposed as BACT, it is not necessary to perform any further technical or economic evaluation, except for the environmental analyses.

**Step 4: Evaluate The Most Effective Controls And Document The Results**

The fourth step entails an evaluation of energy, environmental and economic impacts for determining a final level of control. The evaluation begins with the most stringent control option and continues until a technology under consideration cannot be eliminated based on adverse energy, environmental, or economic impacts.

**Step 5: Select BACT**

The fifth and final step is to select as BACT the most effective of the remaining technologies under consideration for each pollutant of concern. BACT must, at a minimum, be no less stringent than the level of control required by any applicable New Source Performance Standard (NSPS) and National Emissions Standard for Hazardous Air Pollutants (NESHAP) or state regulatory standards applicable to the emission units included in the permits.

**DDG Dryer**

VOC emissions from the DDG dryer (EU-39) are based on calculations provided by the source. The potential to emit VOC from the DDG dryer (EU-39) is greater than twenty-five (25) tons of VOC per year. Therefore, Best Available Control Technology (BACT) is required to be applied to the DDG dryer (EU-39).

**Step 1 – Identify Control Options**

Any control technology chosen must be able to effectively reduce VOC emissions in the dryer exhaust stream given the following characteristics:

- Maximum flow rate of approximately 30,000 acfm.
- High dryer exhaust temperature (approximately 215°F).
- High moisture content resulting from water driven off from the DDG within the dryer.

An RBLC search did not locate entries for distilled spirits production, so the search instead focused on recent applications of BACT at DDG dryers located within dry mill fuel ethanol facilities. Though facilities engaged in fuel ethanol production are typically on a much larger scale than MGPI's facility, the process of producing DDG from spent stillage at MGPI shares a common principal of operation with the similar process at fuel ethanol plants. The technologies applied for control of VOC emissions from direct-fired DDG dryer exhaust at fuel ethanol plants are therefore considered to be potentially applicable for MGPI's proposed direct-fired dryer.

The following control technologies were identified and evaluated to control VOC emissions from the DDG dryer (EU-39).

(a) Thermal Oxidation;

(b) Flares;

(c) Condensers;

(d) Carbon Adsorption;

(e) Wet Scrubber; and

(f) Catalytic Oxidizer.

**Step 2 – Eliminate Technically Infeasible Control Options**

The test for technical feasibility of any control option is whether it is both available and applicable to reducing VOC emissions from the DDG dryer (EU-39). The previously listed information resources were consulted to determine the extent of applicability of each identified control alternative.

(a) Thermal Oxidization

Thermal oxidizers are refractory lined enclosures with one or more burners in which the waste gas stream is routed through a high temperature combustion zone where the waste gas stream is heated and the combustible materials are burned. Thermal oxidizers typically operate at a range from 1400 to 1600 degrees Fahrenheit, depending on the compounds in the waste gas stream being controlled. The residence time for a thermal oxidizer typically ranges from 1 to 2 seconds. Combustion at high operating temperatures and design residence time enables thermal oxidizers to efficiently control VOC emissions from a variety of waste streams.

Thermal oxidation units typically employ some form of heat recovery. Heat-recovery type thermal oxidizers recover the heat generated by the combustion of the VOC laden waste gas stream to assist in the thermal oxidizer operation. There are two types of heat-recovery thermal oxidizers: recuperative and regenerative. Recuperative thermal oxidizers pass the hot combustion gas generated in the combustion zone through a heat exchanger to preheat the unburned waste gas prior to the combustion zone. Regenerative thermal oxidizers (RTOs) use the hot combustion gases to heat a ceramic bed which then heats the incoming waste gas stream up to or near the destruction temperature of VOCs. Additional heat is typically required in an RTO to heat the gas to the designed destruction temperature. Direct-flame type thermal oxidizers heat the exhaust stream to destruction temperature and vent the hot gas. Direct-flame thermal oxidizers do not preheat the inlet gas stream but energy can be recovered from the thermal oxidizer using the hot exhaust gas to generate steam or hot water for the facility.

(b) Flares

Flares are commonly used to oxidize organic materials at high temperatures. Flares can be constructed so that the waste gas stream is sent up a stack (usually greater than 10 meters in height) and burned at the tip of the stack. These flares burn supplemental fuel at the tip of the flare stack using a pilot flame to create a high temperature combustion zone to burn the waste gas.

Enclosed flares consist of multiple burners in refractory-lined enclosures that allow for longer residence times and therefore, result in high destruction efficiencies. Flares are similar, in terms of level of control and enclosure design, to thermal oxidization units; however, flares do not maintain a constant combustion zone temperature. Flares can require supplemental gas to “enrich” the waste gas stream. Waste streams controlled by flares typically have at least 200 to 300 British thermal units (Btu) of combustible constituents per cubic foot (CF) of waste gas for flares to be an effective control technology.

Flare performance depends on the flame temperature, the residence time of the vent gas in the combustion zone, the degree of mixing within the gas stream, and the amount of oxygen available to prevent free radical formation. Since flares do not maintain a constant combustion zone temperature, they require supplemental natural gas to enrich the waste gas stream if the VOC concentration is low. In order to increase the heat value of the DDG dryer exhaust gases, natural gas must be added to the exhaust gasses prior to the flare.

(c) Condensers

Condensers are used to separate materials from gaseous streams typically by cooling and, in some cases, pressurizing a gas stream to cause some of the constituents to condense to a liquid form. Condensers are designed to separate constituents based on the difference in dew points of the compounds that are targeted for separation.

The most common types of condensers are surface and contact condensers. Surface condensers use indirect contact heat exchange in which the coolant does not contact the gas stream directly. Most surface condensers are shell and tube type heat exchangers in which the coolant passes through tubing and a VOC laden gas stream which passes on the outside of the tubes but inside the heat exchanger shell, condenses the VOCs on the outside of the tubes. Contact condensers, however, cool the gas stream by spraying either an ambient-temperature or chilled liquid directly into the gas stream. Spent coolant containing the VOCs from contact condensers usually cannot be reused directly and requires further processing to recover the spent coolant. As a result, the spent coolant is often treated as a waste product that is shipped off-site for recovery. Since contact condensers have environmental and process engineering disadvantages, only surface condensers are addressed in this control technology analysis.

The DDG dryer exhaust characteristics make the control of VOC emissions with a condenser inappropriate. An inordinately large amount of energy would be required to cool the relatively large volume exhaust air stream from its exit temperature of approximately 215°F to a temperature where ethanol (and the other VOC constituents in the vent stream) would condense in appreciable amounts, especially given their relatively low vapor concentrations that translate to very low dew points. Therefore, condenser controls are considered to be technically infeasible and are rejected as BACT for control of VOC from the proposed direct fired dryer.

(d) Carbon Adsorption

Carbon adsorption is a control technology often used to remove organic compounds from gaseous or liquid streams. Carbon adsorption uses a contact vessel to pass the waste gas stream through an activated carbon bed. The organic compounds in the waste gas stream are collected at the interface of the activated carbon by intermolecular forces (such as Van der Waals' interactions) creating a VOC-rich carbon. The VOC-rich carbon is then removed from the carbon bed and new, or "clean", activated carbon is added to the bed. The VOC-rich carbon is reclaimed (i.e., converted back to "clean" carbon) by separating the VOCs from the carbon. This separation process is typically achieved by stripping the carbon in an oxygen deficient environment usually using steam as the stripping media to vaporize the organic material without burning the carbon or the VOCs.

Carbon adsorption has not been demonstrated on an industrial scale for control of VOC from DDG drying operations. Due to the relatively low VOC concentration in the dryer exhaust stream and its relatively high moisture content, the potential would exist for condensation of water which could block effective carbon surface area. Dehumidification of the stream would be necessary, which would involve cooling the hot dryer exhaust vent. This additional process step is not considered to be technically feasible. Even if dehumidification were achieved, the potential effectiveness of activated carbon controls is

severely limited due to the low concentration of VOC in the exhaust stream for control. Therefore, carbon adsorption controls are considered to be technically infeasible and are rejected as BACT for control of VOC from the proposed direct fired dryer.

(e) Wet Scrubbers

There are several types of wet scrubbers that use a variety of techniques to control VOC emissions. The type of scrubber used in a particular application is dependent on the characteristics of the waste gas stream and the pollutants of concern. VOC control scrubbers are designed primarily for creating intimate contact to promote absorption of soluble compounds.

Absorption scrubbers come in a variety of designs but operate on the same primary absorption principles. An absorption scrubber typically consists of a contact tower with a high surface area material (mass transfer material) in the middle. A scrubbing liquid is sprayed down the tower covering the mass transfer material as waste gas is blown in the bottom of the tower, creating intimate contact between the liquid and gas. The soluble gaseous compound(s) then dissolves in the scrubbing liquid. The scrubbing liquid is then removed from the bottom of the tower and treated. The two predominant types of absorption scrubbers are packed and plate towers. Packed towers are vertical vessels that are filled with a packing material such as Raschig Rings or “saddle” shaped pieces of material. This packing creates significant surface area for the liquid and gas to contact. Plate towers are vertical vessels with horizontal sieve plates in the middle. The scrubbing liquid is sent down the tower filling the plate and the gas passes through the plate’s holes generating contact with the scrubbing liquid. Packed towers are more efficient; however, plate towers are used when there is significant particulate matter in the waste gas stream because packed towers are susceptible to clogging when the waste gas stream contains significant PM. Because the VOC streams evaluated in this BACT analysis do not contain significant particulate matter, packed bed towers are the most effective wet scrubbers for reducing VOC emissions (based on cost and control) in this industry and is, therefore, the only scrubber evaluated for VOC control.

(f) Catalytic Oxidizers

Catalytic oxidizers are similar to thermal oxidization in that the units are enclosed structures that use heat to oxidize the combustible materials. Catalytic oxidation, however, heats the waste gas stream in the presence of a catalyst. The catalyst decreases the necessary operating temperature for the VOCs to oxidize and may potentially increase the efficiency of the oxidation unit. However, the disadvantages of catalytic oxidation include catalyst selectivity (catalyst may not be effective on some of the targeted compounds), catalyst cost (catalysts need to be replaced on a regular basis), and catalyst fouling (particulate matter and other pollutants can foul or degrade catalysts).

Catalytic oxidizers use a catalyst to lower the operating temperature of the oxidation unit. The catalyst must remain effective during operation in order for the control efficiency of the device be maintained. Fouling of the catalyst will rapidly decrease the control efficiency. The catalyst material used for catalytic oxidation has small channels for the waste gas stream to flow through. As a result, particulate matter in the dryer exhaust streams is likely to accumulate in the catalyst material, thereby fouling the catalyst and reducing the control efficiency. For this reason, OAQ has concluded that catalytic oxidation is an unreliable control technology for the DDG dryer because of the presence of particulates in the exhaust gasses.

**Step 3 – Rank Remaining Control Technologies by Control Effectiveness**

The remaining control options are in order of descending control effectiveness:

(a) Thermal Oxidization - 98%

(b) Flares - 98%

(c) Wet Scrubber - 98%

**Step 4 – Evaluate the Most Effective Controls and Document Results**

Since each technology is capable of achieving an equivalent level of control (98% of VOC emissions), either thermal oxidation, wet scrubbing, or flaring could be considered the top-ranked control. According to USEPA Guidance (New Source Review Workshop Manual, Draft October 1990), "…an applicant proposing the top control alternative need not provide cost and other detailed information in regard to other control options. In such cases the applicant should document that the control option chosen is, indeed, the top, and review for collateral environmental impacts."

Of the three alternatives, thermal oxidation is by far the most commonly used control in practice for control of VOC emissions from DDG drying operations, as listed in the table below.

| Company | RBLC ID | Source | Permit Issuance Date | Technology | VOC Limit(s) |
|---|---|---|---|---|---|
| Homeland Energy Solutions, LLC, PN 06-672 | IA-0089 | HRSG from Dryers and Gasification | 08/08/2007 | TO | 98% or 0.006 lb/MMBtu, 6.57 tpy |
| Archer Daniels Midland | IA-0088 | Fermentation Process and Indirect-fired DDGS Dryer | 06/29/2007 | Route Process Off-gasses through the Dryers Combustion Chamber | 98%, 3.16 lb/hr |
| Southwest Iowa Renewable Energy | IA-0092 | DDGS Dryers and Distillation | 04/19/2007 | TO | 99% or 10 ppmv, 5.11 lb/hr |
| MGP Ingredients of Illinois | IL-0105 | Feed Dryer D6500 | 01/25/2006 | Eco-dry system or other comparable system that passes exhaust through the dryer | 0.12 lb/MMBtu 3 - hr average |
| Heartland Corn Products | MN-0062 | DDGS Dryer Operation #1 | 12/22/2005 | TO | 95%, 8.87 lb/hr |
| Heartland Corn Products | MN-0062 | DDGS Dryer Operation #2 (includes beer stripper, recitifier, side stripper, molecular sieve, evaporator, and storage tanks) | 12/22/2005 | TO | 95%, 15.26 lb/hr |

Note: Several State BACTs were issued under 326 IAC 8-1-6 for this SIC code. However, these facilities are now subject to the State RACT under 326 IAC 8-5-6. Therefore, these have not been included in this discussion.

Other considerations with respect to environmental and energy impacts are listed below:

- Thermal oxidation and flaring, unlike wet scrubbing, do not result in the generation of another process stream (scrubber water) requiring subsequent treatment or disposal.

- Thermal oxidation provides similar control to flaring, but operates more efficiently, particularly in the case of an RTO where a substantial portion of the waste heat is recovered and used to pre-heat the incoming vent stream for treatment (typical thermal efficiencies in excess of 90%).

- Additional energy requirements (i.e., natural gas consumption) would be necessary to operate an RTO. In the case of MGPI, however, this impact is countered by the fact that under normal facility operation as proposed, the direct-fired dryer would operate in lieu of the facility's existing steam tube dryers. The increased natural gas use at the proposed dryer/controls would be balanced by a decrease in steam demand at the steam tube dryers. Natural gas consumption by the facility's existing boilers would therefore decrease. MGPI estimates that, under current operations with steam tube drying, approximately 1,120 Btu steam energy are required per pound of water evaporated. When the proposed direct-fired dryer and controls are in operation, this rate is expected to remain essentially the same for a given evaporative load.

- Thermal oxidation provides effective reduction of HAP emissions contained in the DDG dryer exhaust, representing the elimination of an adverse environmental impact that would result from its implementation.

Based on the reasons listed above, thermal oxidation is the most advantageous of the top ranked technologies with respect to environmental and energy impacts.

MGPI has proposed the use of an RTO with 98% overall control efficiency and a 1.91 lb/hr limit for the new dryer.

IDEM is aware that that the above control technologies may be able to periodically achieve control efficiencies that exceed 98% under certain operating conditions. However, BACT must be achievable on a consistent basis under normal operational conditions. BACT limitations do not necessarily reflect the highest possible control efficiency achievable by the technology on which the emission limitation is based. The permitting authority has the discretion to base the emission limitation on a control efficiency that is somewhat lower than the optimal level. There are several reasons why the permitting authority might choose to do this. One reason is that the control efficiency achievable through the use of the technology may fluctuate, so that it would not always achieve its optimal control efficiency. In that case, setting the emission limitation to reflect the highest control efficiency would make violations of the permit unavoidable. To account for this possibility, a permitting authority must be allowed a certain degree of discretion to set the emission limitation at a level that does not necessarily reflect the highest possible control efficiency, but will allow the Permittee to achieve compliance consistently. While we recognize that greater than 98% may be achievable as an average during testing, IDEM allows for sources to include a safety factor, or margin of error, to allow for minor variations in the operation of the emission units and the control device.

**Step 5 – Select BACT**

The following is the VOC BACT for the DDG dryer:

(a) The VOC emissions from the DDG dryer (EU-39) shall be controlled by an RTO.

(b) The RTO shall operate with an overall control efficiency, which includes capture and destruction efficiencies, of not less than 98%.

(c) The VOC emissions from the DDG dryer (EU-39) shall not exceed 1.91 lb/hr.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**
*We Protect Hoosiers and Our Environment.*
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

**Michael R. Pence**
*Governor*

**Thomas W. Easterly**
*Commissioner*

**SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED**

TO: William Graves
MGPI of Indiana
7 Ridge Ave
Lawrenceburg IN 47025

DATE: May 11, 2015

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Title V SSM
029-35496-00005

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 6/13/2013

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*Governor*

**Thomas W. Easterly**
*Commissioner*

May 11, 2015

TO: Lawrenceburg Public Library

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

**Applicant Name: MGPI of Indiana LLC**
**Permit Number: 029-35496-00005**

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 6/13/2013

# Mail Code 61-53

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| IDEM Staff | CDENNY 5/7/2015<br>MGPI of Indiana 029-35496-00005 (final) | | | AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING |
| Name and address of Sender | ▶ | Indiana Department of Environmental Management<br>Office of Air Quality – Permits Branch<br>100 N. Senate<br>Indianapolis, IN 46204 | Type of Mail:<br>**CERTIFICATE OF MAILING ONLY** | |

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| 1 | | William Graves MGPI of Indiana 7 Ridge Ave Lawrenceburg IN 47025 (Source CAATS) | | | | | | | | | |
| 2 | | Mike Templin Plant Mgr MGPI of Indiana 7 Ridge Ave Lawrenceburg IN 47025 *(RO CAATS)* | | | | | | | | | |
| 3 | | Michael & Monica Ramsey 9931 Old SR 56 Aurora IN 47001 *(Affected Party)* | | | | | | | | | |
| 4 | | Dearborn County Commissioner 215 B West High Street Lawrenceburg IN 47025 *(Local Official)* | | | | | | | | | |
| 5 | | Lawrenceburg City Council and Mayors Office 212 Walnut St. Lawrenceburg IN 47025 *(Local Official)* | | | | | | | | | |
| 6 | | Dearborn County Health Department 215-b W. Hight St, County Admin Building Lawrenceburg IN 47025-1910 *(Health Department)* | | | | | | | | | |
| 7 | | Mr. John Teaney P.O. Box 494 10837 Aurora IN 47001 *(Affected Party)* | | | | | | | | | |
| 8 | | Robin & Vic Willoughby 311 Broadway Street Aurora IN 47001 *(Affected Party)* | | | | | | | | | |
| 9 | | James & Mary Hassett 7199 E. Laughery Creek Rd Aurora IN 47001 *(Affected Party)* | | | | | | | | | |
| 10 | | Ken & Jackie Greive 4685 E. Laughery Creek Road Aurora IN 47001 *(Affected Party)* | | | | | | | | | |
| 11 | | Marlin M. Guss, Jr. 10400 Millstone Dr, P.O. Box 272 Aurora IN 47001 *(Affected Party)* | | | | | | | | | |
| 12 | | Mrs. Shirley Greive 4412 E. Laughery Aurora IN 47001 *(Affected Party)* | | | | | | | | | |
| 13 | | Ms. Patricia Huff 10095 Old SR 56 Aurora IN 47001 (Affected Party) | | | | | | | | | |
| 14 | | Sam & Nancy Valone 3826 E. Laughery Creek Rd Aurora IN 47001 *(Affected Party)* | | | | | | | | | |
| 15 | | Mrs. Melanie Bushorn 4172 E. Laughery Creek Rd Aurora IN 47001 *(Affected Party)* | | | | | | | | | |

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| Name and address of Sender | ▶ | Indiana Department of Environmental Management<br>Office of Air Quality – Permits Branch<br>100 N. Senate<br>Indianapolis, IN 46204 | Type of Mail:<br>**CERTIFICATE OF MAILING ONLY** | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | Lawrenceburg Public Library 150 Mary Street Lawrenceburg IN 47025 (Library) | | | | | | | | | |
| 2 | | Mr. Mike Wieczorek ENVIRON International Corp. 333 W Wacker Dr, Ste 2700 Chicago IL 60606 *(Consultant)* | | | | | | | | | |
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