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 / Applicant

DATE: August 19, 2013

RE: Central Indiana Ethanol, LLC / 053-32070-00062

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

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

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) 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.

For an **initial Title V Operating Permit**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **thirty (30)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(b).

For a **Title V Operating Permit renewal**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **fifteen (15)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(a).

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.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of an initial Title V operating permit, permit renewal, or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impractible to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency
401 M Street
Washington, D.C. 20406

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.

Enclosures
FNTVOP.dot 6/13/2013

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Part 70 Operating Permit
OFFICE OF AIR QUALITY

Central Indiana Ethanol, LLC
2955 West Delphi Pike
Marion, Indiana 46952

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

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

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

Operation Permit No.: T053-32070-00062	
Issued by: Jenny Acker, Section Chief Permits Branch Office of Air Quality	Issuance Date: August 19, 2013 Expiration Date: August 19, 2018

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1, A.3, and A.4 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 ethanol production plant.

Source Address:	2955 West Delphi Pike, Marion, Indiana 46952
General Source Phone Number:	(765) 384 4001
SIC Code:	2869
County Location:	Grant
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD, with Greenhouse Gases above 100,000 tons per year Minor Source, under Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

This stationary ethanol production plant consists of two (2) plants:

(a) Central Indiana Ethanol, LLC is located at 2955 West Delphi Pike, Marion, Indiana; and

(b) EPCO Carbon Dioxide Products is located at 2975 West Delphi Pike, Marion, Indiana.

However, these plants are located on one or more contiguous properties, have the same two digit SIC code in addition to a support relationship, and are under common control. Therefore, they are considered one (1) major source, as defined by 326 IAC 2-7-1(22).

A.3 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) Three (3) corn dump pits, identified as EU001, constructed in 2006, each with a maximum throughput rate of 420 tons of corn per hour, controlled by baghouse CE001, and exhausting through stack EP001. This consists of two (2) truck dump pits and one (1) railcar dump pit.

(b) One (1) grain handling operation, constructed in 2006, controlled by baghouse CE001, exhausting through stack EP001, and consisting of the following:

(1) One (1) corn conveyor, identified as EU002, with a maximum throughput rate of 420 tons per hour.

(2) One (1) corn elevator, identified as EU003, with a maximum throughput rate of 420 tons per hour.

(3) Two (2) corn storage bins, identified as EU004 and EU005, each with a maximum capacity of 200,000 bushels and maximum throughput rate of 420 tons per hour.

(4) One (1) scalper, identified as EU006, with a maximum throughput rate of 140 tons per hour.

(5) One (1) surge bin, identified as EU007, with a maximum throughput rate of 140 tons per hour.

(6) One (1) corn storage bin, identified as EU064, (constructed in 2008) with a maximum capacity of 750,000 bushels and maximum throughput rate of 420 tons per hour.

(c) One (1) corn storage bin, identified as EU066, approved for construction in 2010, with a maximum capacity of 750,000 bushels and a maximum throughput rate of 420 tons per hour, utilizing no control devices, and exhausting to the atmosphere.

(d) Three (3) hammermills, identified as EU010, EU011, and EU067, with EU010 and EU011 constructed in 2006 and EU067 approved for construction in 2010, each with a maximum throughput rate of 140 tons of corn per hour, controlled by baghouse CE003, and exhausting through stack EP003.

(e) One (1) receiving and transfer system, approved for construction in 2011, consisting of:

(1) One (1) unloading area, consisting of:

(A) One (1) truck unloading area, identified as EU070, with a maximum capacity of 25 tons of material per hour, consisting of two (2) pneumatic truck unloading conveyors, identified as EU071 and EU072, with a combined maximum capacity of 25 tons of material per hour, with particulate emissions controlled by one (1) baghouse, identified as CE015, with all emissions exhausted through stack EP015.

(B) One (1) railcar unloading area, identified as EU073, with a maximum capacity of 25 tons of material per hour, consisting of one (1) pneumatic railcar unloading conveyor, identified as EU074, with a maximum capacity of 25 tons of material per hour, with particulate emissions controlled by one (1) baghouse, identified as CE015, with all emissions exhausted through stack EP015.

(C) One (1) fork truck unloading area, identified as EU075, with a maximum capacity of 25 tons of material per hour, approved in 2013 for modification, with particulate emissions vented through either of the following:

(i) One (1) manual conveyance system, controlled by baghouse CE016, exhausting to stack EP016.

(ii) One (1) pneumatic conveyance system, controlled by baghouse CE022, exhausting to stack EP022.

(D) One (1) truck unloading area, identified as EU080, with a maximum capacity of 25 tons of material per hour, consisting of one (1) conveyor, with particulate emissions controlled by one (1) baghouse, identified as CE018, with all emissions exhausted through stack EP018. The

baghouse has a grain loading of 0.0000295 grain/dscf and 1,300 scfm air flow rate.

Note: The raw material is confidential information.

(2) One (1) storage process, consisting of two (2) storage bins, identified as EU076 and EU077, with a combined maximum capacity of 250 tons and a maximum throughput rate of 25 tons per hour, with particulate emissions controlled by one (1) baghouse, identified as CE015, with all emissions exhausted through stack EP015.

(3) One (1) process feed area, with an airlock and connection from EU080, consisting of two (2) surge hoppers, identified as EU078 and EU079, feeding material received from the storage bins to the cook process or materials received from truck unloading area (EU080) to the cook process, with a maximum capacity of 25 tons of material per hour, with particulate emissions controlled by one (1) baghouse, identified as CE017, and exhausting through stack EP017.

(f) One (1) fermentation process, constructed in 2006, with a maximum throughput rate of 7,060 gallons of ethanol per hour, controlled by CO_2 wet scrubbers CE005 (vented to stack EP005) and CE010 (vented to stack EP010), and consisting of the following:

(1) Four (4) fermenters, identified as EU016, EU017, EU018, and EU019.

(2) One (1) beer well, identified as EU020.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(g) One (1) thermal oxidizer with heat recovery steam generator (TO/HRSG) system, identified as CE007, constructed in 2006, with a maximum heat input capacity of 135 MMBtu/hr, using natural gas and process waste gases from the DDGS dryers as fuels, with emissions exhausted through stack EP007.

Under 40 CFR 60, Subpart Db, CE007 is an affected facility.

(h) One (1) distillation process, constructed in 2006, with a maximum throughput rate of 6,850 gallons of ethanol per hour, controlled by TO/HRSG system CE007, exhausting through stack EP007, and consisting of the following:

(1) Two (2) slurry mixers, identified as EU049 and EU058.

(2) One (1) slurry tank, identified as EU050.

(3) Three (3) liquefaction tanks, identified as EU014, EU051, and EU059, each with a maximum capacity of 7,000 gallons per hour.

(4) One (1) cook tube, identified as EU052.

(5) One (1) flash tank, identified as EU053.

(6) One (1) yeast tank, identified as EU015.

(7) One (1) 190 proof condenser, identified as EU054.

(8) One (1) 200 proof condenser, identified as EU055.

(9) One (1) beer stripper, identified as EU021.

(10) One (1) side stripper, identified as EU022.

(11) One (1) rectifier, identified as EU023.

(12) Molecular sieve units, identified as EU024.

(13) Eight (8) evaporators, identified as EU025.

(14) Four (4) centrifuges, identified as EU026 through EU029.

(15) One (1) slurry tank, identified as EU068, approved for construction in 2010.

(16) One (1) centrifuge, identified as EU069, approved for construction in 2010.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(i) Two (2) natural gas fired DDGS dryers, identified as EU035 and EU056, constructed in 2006, each with a maximum heat input rate of 45 MMBtu/hr and a maximum throughput rate of 34 tons of DDGS per hour, controlled by multiclone CE006, with emissions venting to Thermal Oxidizer/Heat Recovery Steam Generating (TO/HRSG) System CE007, and exhausting to stack EP007.

(j) One (1) DDGS cooler, identified as EU036, constructed in 2006, with a maximum throughput rate of 34 tons/hr of DDGS, controlled by baghouse CE014, and exhausting to stack EP014.

(k) One (1) DDGS loadout operation, constructed in 2006, with a maximum throughput rate of 101 tons per hour, controlled by baghouse CE008, exhausting to stack EP008, and consisting of the following:

(1) One (1) DDGS dump pit, identified as EU040.

(2) One (1) DDGS elevator, identified as EU041.

(3) One (1) DDGS conveyor, identified as EU042.

(4) One (1) DDGS load spout, identified as EU043.

(l) One (1) ethanol loading rack for trucks, identified as EU045A, constructed in 2006, with a maximum throughput rate of 800 gallons per minute. The truck loading process is controlled by the enclosed flare CE009, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP009.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(m) One (1) ethanol loading rack for railcars, identified as EU045B, constructed in 2006, with a maximum throughput rate of 1000 gallons per minute. The railcar loading process is

controlled by the enclosed flare CE009, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP009.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(n) One (1) distillation process, approved in 2013 for construction, with a maximum throughput rate of 40,000 gallons of non-fuel grade ethanol per hour, consisting of the following:

(1) Three (3) distillation columns and seven (7) condensers operating in a close loop.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(2) Two (2) liquid storage tanks, identified as T013 and T014, each with a maximum capacity of 500,000 gallons.

Under 40 CFR 60, Subpart Kb, T013 and T014 are affected facilities.

(3) Three (3) liquid storage tanks, identified as T015, T016, and T017, each with a maximum capacity of 24,000 gallons.

Under 40 CFR 60, Subpart Kb, T015, T016, and T017 are affected facilities.

(4) Two (2) natural gas fired boilers, identified as Boiler #1 (EU081) and Boiler #2 (EU082), each with a maximum heat input rate of 48.16 MMBtu/hr, exhausting uncontrolled to stacks EP020 and EP021, respectively.

Under 40 CFR 60, Subpart Dc, EU081 and EU082 are affected facilities.

(o) One (1) non-fuel grade ethanol loading skid for trucks, identified as EU083, approved in 2013 for construction, with a maximum throughput rate of 1000 gallons per minute. The truck loading process is controlled by the enclosed flare CE019, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP019.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(p) One (1) non-fuel grade ethanol loading skid for railcars, identified as EU084, approved in 2013 for construction, with a maximum throughput rate of 1667 gallons per minute. The railcar loading process is controlled by the enclosed flare CE019, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP019.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

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) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, including space heaters with a combined heat input capacity not to exceed 2.5 million (2,500,000) Btu per hour.

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

(c) Forced and induced draft cooling tower systems not regulated under a NESHAP, consisting of:

(1) One (1) four cell cooling tower, identified as F004, with a circulation rate of 33,000 gallons per minute.

(2) One (1) four cell cooling tower, identified as F004, with a circulation rate of 21,000 gallons per minute.

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

(e) Heat exchanger cleaning and repair.

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

(g) Paved roads and parking lots with public access. [326 IAC 6-4] [326 IAC 6-5]

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

(i) Farm operations.

(j) Stationary fire pumps, including one (1) emergency diesel fire pump, identified as EU034, constructed in 2006, with a maximum power rating of 350 horsepower, and exhausting to stack EP006. [326 IAC 2-2]

Under 40 CFR Part 63, Subpart ZZZZ, EU034 is an affected unit.

(k) Other emission units, not regulated by a NESHAP, with PM_{10}, NO_x, and SO_2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(1) One (1) 190 proof tank, identified as T001, constructed in 2006, with a maximum capacity of 100,000 gallons.

Under 40 CFR 60, Subpart Kb, T001 is an affected facility.

(2) One (1) 200 proof tank, identified as T002, constructed in 2006, with a maximum capacity of 100,000 gallons.

Under 40 CFR 60, Subpart Kb, T002 is an affected facility.

(3) One (1) denaturant tank, identified as T003, constructed in 2006, with a maximum capacity of 100,000 gallons. [326 IAC 8-4-3]

Under 40 CFR 60, Subpart Kb, T003 is an affected facility.

(4) Two (2) denatured ethanol tanks, identified as T004 and T005, constructed in 2006, each with a maximum capacity of 750,000 gallons.

Under 40 CFR 60, Subpart Kb, T004 and T005 are affected facilities.

(5) One (1) fuel additive tank, identified as T006, constructed in 2006, with a maximum storage capacity of 2,300 gallons.

(6) One (1) diesel storage tank, identified as T007, constructed in 2006, with a maximum storage capacity of 1,000 gallons.

(7) One (1) gasoline storage tank, identified as T008, approved for construction in 2010, with a maximum capacity of 350 gallons of gasoline, and exhausting to the atmosphere. [326 IAC 8-4-6] [326 IAC 8-4-9]

Under 40 CFR 63, Subpart CCCCCC, T008 is an affected facility.

(8) One (1) diesel storage tank, identified as T009, approved for construction in 2010, with a maximum capacity of 1,000 gallons of diesel fuel, and exhausting to the atmosphere.

(9) One (1) E-85 storage tank, identified as T010, approved for construction in 2010, with a maximum capacity of 1,000 gallons of E-85 fuel, and exhausting to the atmosphere.

(10) One (1) biomethanator, identified as EU048, constructed in 2006, controlled by 6.0 MMBtu/hr biomethanator flare CE013, and exhausting to stack EP013. [326 IAC 2-2]

(11) One (1) corn oil separation unit, identified as EU061.

(12) One (1) corn oil storage tank, identified as EU062, with a maximum capacity of 35,000 gallons.

EPCO Carbon Dioxide Products

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, including space heaters with a combined heat input capacity not to exceed 0.63 million (630,000) Btu per hour.

(b) Forced and induced draft cooling tower systems not regulated under a NESHAP, consisting of:

(1) One (1) four cell cooling tower, identified as EPCO, with a circulation rate of 900 gallons per minute.

(c) Paved roads and parking lots with public access. [326 IAC 6-4] [326 IAC 6-5]

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, T053-32070-00062, 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. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent 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) If required by specific condition(s) in Section D of this permit, 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.

(b) 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).

(c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

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

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the

affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

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

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

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

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

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

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

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) All terms and conditions of permits established prior to T053-32070-00062 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 combined permit, all previous registrations and permits are superseded by this combined new source review and 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(40). 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(36)) 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 forty percent (40%) 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 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the attached plan as in Attachment A. The provisions of 326 IAC 6-5 are not federally enforceable.

C.7 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.8 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.9 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.10 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.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

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 or of initial start-up, whichever is later, 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 or the date of initial startup, whichever is later, 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).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.12 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.

(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.13 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 prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval 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 ninety (90) days after the date of issuance of this permit.

The ERP 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) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(f) 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.14 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.15 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

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

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

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

(1) initial inspection and evaluation;

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

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

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

(1) monitoring results;

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

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

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

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

C.16 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.17 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(b)(2), starting in 2005 and every three (3) years thereafter, the Permittee shall submit by July 1 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(32) (“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.18 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

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

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

(b) The address for report submittal is:

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

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

(d) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit, “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS – Grain / DDGS Receiving & Handling

Emissions Unit Description [326 IAC 2-7-5(14)]:

(a) Three (3) corn dump pits, identified as EU001, constructed in 2006, each with a maximum throughput rate of 420 tons of corn per hour, controlled by baghouse CE001, and exhausting through stack EP001. This consists of two (2) truck dump pits and one (1) railcar dump pit.

(b) One (1) grain handling operation, constructed in 2006, controlled by baghouse CE001, exhausting through stack EP001, and consisting of the following:

(1) One (1) corn conveyor, identified as EU002, with a maximum throughput rate of 420 tons per hour.

(2) One (1) corn elevator, identified as EU003, with a maximum throughput rate of 420 tons per hour.

(3) Two (2) corn storage bins, identified as EU004 and EU005, each with a maximum capacity of 200,000 bushels and maximum throughput rate of 420 tons per hour.

(4) One (1) scalper, identified as EU006, with a maximum throughput rate of 140 tons per hour.

(5) One (1) surge bin, identified as EU007, with a maximum throughput rate of 140 tons per hour.

(6) One (1) corn storage bin, identified as EU064, (constructed in 2008) with a maximum capacity of 750,000 bushels and maximum throughput rate of 420 tons per hour.

(c) One (1) corn storage bin, identified as EU066, approved for construction in 2010, with a maximum capacity of 750,000 bushels and a maximum throughput rate of 420 tons per hour, utilizing no control devices, and exhausting to the atmosphere.

(d) Three (3) hammermills, identified as EU010, EU011, and EU067, with EU010 and EU011 constructed in 2006 and EU067 approved for construction in 2010, each with a maximum throughput rate of 140 tons of corn per hour, controlled by baghouse CE003, and exhausting through stack EP003.

(e) One (1) receiving and transfer system, approved for construction in 2011, consisting of:

(1) One (1) unloading area, consisting of:

(A) One (1) truck unloading area, identified as EU070, with a maximum capacity of 25 tons of material per hour, consisting of two (2) pneumatic truck unloading conveyors, identified as EU071 and EU072, with a combined maximum capacity of 25 tons of material per hour, with particulate emissions controlled by one (1) baghouse, identified as CE015, with all emissions exhausted through stack EP015.

(B) One (1) railcar unloading area, identified as EU073, with a maximum capacity of 25 tons of material per hour, consisting of one (1) pneumatic railcar unloading conveyor, identified as EU074, with a maximum capacity of 25 tons of material per hour, with particulate emissions controlled by one (1) baghouse, identified as CE015, with all emissions exhausted through stack EP015.

(C) One (1) fork truck unloading area, identified as EU075, with a maximum capacity of 25 tons of material per hour, with particulate emissions controlled by one (1) baghouse, identified as CE016, with all emissions exhausted through stack EP016.

(D) One (1) truck unloading area, identified as EU080, with a maximum capacity of 25 tons of material per hour, consisting of one (1) conveyor, with particulate emissions controlled by one (1) baghouse, identified as CE018, with all emissions exhausted through stack EP018. The baghouse has a grain loading of 0.0000295 grain/dscf and 1,300 scfm air flow rate.

Note: The raw material is confidential information.

(2) One (1) storage process, consisting of two (2) storage bins, identified as EU076 and EU077, with a combined maximum capacity of 250 tons and a maximum throughput rate of 25 tons per hour, with particulate emissions controlled by one (1) baghouse, identified as CE015, with all emissions exhausted through stack EP015.

(3) One (1) process feed area, with an airlock and connection from EU080, consisting of two (2) surge hoppers, identified as EU078 and EU079, feeding material received from the storage bins to the cook process or materials received from truck unloading area (EU080) to the cook process, with a maximum capacity of 25 tons of material per hour, with particulate emissions controlled by one (1) baghouse, identified as CE017, and exhausting through stack EP017.

(k) One (1) DDGS loadout operation, constructed in 2006, with a maximum throughput rate of 101 tons per hour, controlled by baghouse CE008, exhausting to stack EP008, and consisting of the following:

(1) One (1) DDGS dump pit, identified as EU040.

(2) One (1) DDGS elevator, identified as EU041.

(3) One (1) DDGS conveyor, identified as EU042.

(4) One (1) DDGS load spout, identified as EU043.

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

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

D.1.1 PSD Minor Limits for PM, PM_{10}, and $PM_{2.5}$ [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, PM, PM_{10}, and $PM_{2.5}$ emissions from the following units shall not exceed the emission limits listed in the table below:

Unit ID	Stack ID	Unit Description	Control ID	PM Emission Limit (lb/hr)	PM_{10} Emission Limit (lb/hr)	$PM_{2.5}$ Emission Limit (lb/hr)
EU001 - EU007, EU0064	EP001	Grain Receiving and Handling	CE001	1.67	1.67	1.67

Unit ID	Stack ID	Unit Description	Control ID	PM Emission Limit (lb/hr)	PM_{10} Emission Limit (lb/hr)	$PM_{2.5}$ Emission Limit (lb/hr)
EU010, EU011, EU067	EP003	Hammermills	CE003	1.20	1.20	1.20
EU040 - EU043	EP008	DDGS Handling and Loadout	CE008	0.16	0.16	0.16
EU075	EP016	Fork Truck Unloading Area	CE016	0.64	0.64	0.64

Note: Emission limits are combined lb/hr limits for all emission units exhausting out of each stack.

Compliance with these PM, PM_{10}, and $PM_{2.5}$ limits, combined with the potential to emit PM, PM_{10}, and $PM_{2.5}$ from other emission units at the source, shall limit the PM, PM_{10}, and $PM_{2.5}$ emissions from the entire source to less than 250 tons per twelve (12) consecutive month period, each, and render 326 IAC 2-2 (PSD) not applicable.

D.1.2 Particulate Emission Limitations [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2, particulate emissions from each of following operations shall not exceed the pound per hour limit listed in the table below:

Unit ID	Unit Description	Control ID	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lb/hr)
EU001	Three (3) Corn Dump Pits	CE001	420	66.89
EU002	Corn Conveyor	CE001	420	66.89
EU003	Corn Elevator	CE001	420	66.89
EU004	Corn Storage Bin	CE001	420	66.89
EU005	Corn Storage Bin	CE001	420	66.89
EU064	Corn Storage Bin	CE001	420	66.89
EU066	Corn Storage Bin	N/A	420	66.89
EU006	Scalper	CE001	140	54.72
EU007	Surge Bin	CE001	140	54.72
EU010	Hammermill	CE003	140	54.72
EU011	Hammermill	CE003	140	54.72
EU067	Hammermill	CE003	140	54.72
EU040	DDGS Dump Pit	CE008	101	51.38
EU041	DDGS Elevator	CE008	101	51.38
EU042	DDGS Conveyor	CE008	101	51.38
EU043	DDGS Load Spout	CE008	101	51.38
EU070	Truck Unloading Area	CE015	25	35.43
EU071 and EU072	Truck Unloading Conveyors	CE015	25	35.43
EU073	Railcar Unloading Area	CE015	25	35.43
EU074	Railcar Unloading Conveyor	CE015	25	35.43
EU075	Fork Truck Unloading Area	CE016	25	35.43
EU076 and EU077	Storage Bins	CE015	25	35.43
EU078 and EU079	Surge Hoppers	CE017	25	35.43
EU080	Truck Unloading Area	CE018	25	35.43

The pounds per hour limitations were 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

(b) Pursuant to 326 IAC 6-3-2(e)(3), when the process weight exceeds 200 tons per hour, the maximum allowable emission may exceed the emission limits shown in the table above, provided the concentration of particulate matter in the gas discharged to the atmosphere is less than 0.10 pounds per 1,000 pounds of gases.

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.1.4 Particulate Control

In order to ensure compliance with Conditions D.1.1 and D.1.2, the baghouses for particulate control shall be in operation and control emissions from the emission units at all times that the emission units are in operation as listed in the table below:

Unit ID	Unit Description	Baghouse ID
EU001 - EU007, EU064	Grain Receiving and Handling	CE001
EU010, EU011, EU067	Hammermills	CE003
EU040 - EU043	DDGS Handling and Loadout	CE008

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.1.5 Testing Requirements [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM, PM_{10}, and $PM_{2.5}$ testing of baghouses CE001, CE003, and CE008 utilizing methods as approved by the Commissioner at least once every five (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. PM_{10} and $PM_{2.5}$ includes filterable and condensible PM.

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

D.1.6 Visible Emissions Notations

(a) Visible emission notations of baghouse CE001, CE003, and CE008 stack exhausts 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 reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.7 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the corn dump pits (EU001), the grain handling operations (EU002 through EU007, and EU064), the hammermills (EU010, EU011, and EU067), and the DDGS handling and loadout operations (EU040 through EU043) at least once per day when the associated emission units are in operation. When, for any one reading, the pressure drop across the baghouse is outside the normal range, the Permittee shall take a reasonable response. The normal range for these units is a pressure drop between 1.0 and 6.0 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 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

(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).

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.

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

D.1.9 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.6, the Permittee shall maintain records of daily visible emission notations of the baghouses 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).

(b) To document the compliance status with Condition D.1.7, the Permittee shall maintain daily records of pressure drop across the baghouses. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the process did not operate that day).

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

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS - Fermentation Process

Emissions Unit Description [326 IAC 2-7-5(14)]:

(f) One (1) fermentation process, constructed in 2006, with a maximum throughput rate of 7,060 gallons of ethanol per hour, controlled by CO_2 wet scrubbers CE005 (vented to stack EP005) and CE010 (vented to stack EP010), and consisting of the following:

(1) Four (4) fermenters, identified as EU016, EU017, EU018, and EU019.

(2) One (1) beer well, identified as EU020.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

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

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

D.2.1 PSD and MACT Minor Limits for VOC and HAP [326 IAC 2-2] [326 IAC 2-4.1]

In order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (MACT) not applicable, the Permittee shall comply with the following:

(a) Emissions from wet scrubber CE005, which is used to control the emissions from the fermentation process, shall not exceed the following:

(i) VOC emissions shall not exceed 9.5 lb/hr.

(ii) Acetaldehyde emissions shall not exceed 1.88 lb/hr.

(iii) Total HAP emissions shall not exceed 1.91 lb/hr.

(b) Emissions from wet scrubber CE010, which is used to control the emissions from the fermentation process, shall not exceed with the following:

(i) VOC emissions shall not exceed 0.62 lb/hr.

(ii) Acetaldehyde emissions shall not exceed 0.114 lb/hr.

(iii) Total HAP emissions shall not exceed 0.13 lb/hr.

Compliance with these VOC limits, combined with the potential to emit VOC from other emission units at the source, shall limit the VOC emissions from the entire source to less than 250 tons per twelve (12) consecutive month period and render 326 IAC 2-2 (PSD) not applicable.

Compliance with these HAP limits, combined with the potential to emit HAP from other emission units at the source, shall limit the HAP emissions from the entire source to less than 10 tons per twelve (12) consecutive month period for a single HAP and less than 25 tons per twelve (12) consecutive month period for total HAPs and render 326 IAC 2-4.1 (MACT) not applicable.

D.2.2 VOC Emissions [326 IAC 8-5-6]

Pursuant to 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills), the Permittee shall comply with the following:

(a) The VOC emissions from the fermentation process shall be controlled by wet scrubbers CE005 and CE010.

(b) The overall VOC control efficiency (including the capture efficiency and adsorption efficiency) for wet scrubber CE005 shall be at least 98%, or the VOC emissions from the scrubber CE005 shall not exceed 20 ppmv.

(c) The overall VOC control efficiency (including the capture efficiency and adsorption efficiency) for wet scrubber CE010 shall be at least 98%, or the VOC emissions from the scrubber CE010 shall not exceed 20 ppmv.

D.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.2.4 VOC and HAP Control

In order to ensure compliance with Conditions D.2.1 and D.2.2, wet scrubbers CE005 and CE010 for VOC and HAP control shall be in operation and control emissions from the fermentation process at all times that the fermentation process is in operation.

D.2.5 Testing Requirements [326 IAC 2-1.1-11] [326 IAC 8-5-6]

(a) In order to demonstrate compliance with Conditions D.2.1(a) and D.2.2(b), the Permittee shall perform VOC (including emission rate, adsorption efficiency, and capture efficiency) and acetaldehyde testing of scrubber CE005 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration.

(b) In order to demonstrate compliance with Conditions D.2.1(b) and D.2.2(c), the Permittee shall perform VOC (including emission rate, adsorption efficiency, and capture efficiency) and acetaldehyde testing of scrubber CE010 utilizing methods as approved by the Commissioner at least once every five (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.

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

D.2.6 Parametric Monitoring [326 IAC 8-5-6]

(a) The Permittee shall monitor and record scrubber CE005 as follows:

(1) The Permittee shall monitor and record the pressure drop across scrubber CE005 at least once per day when the fermentation process is in operation. When, for any one reading, the pressure drop across the scrubber is outside the normal range, the Permittee shall take a reasonable response step. The normal range for these units is a pressure drop between 1.0 and 6.0 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. Failure to take response steps shall be considered a deviation from this permit.

(2) The Permittee shall monitor and record the flow rate of scrubber CE005 at least once per day when the fermentation process is in operation.

(3) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Conditions D.2.1(a) and D.2.2(b).

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

(5) 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. Failure to take response steps shall be considered a deviation from this permit.

(b) The Permittee shall monitor and record scrubber CE010 as follows:

(1) The Permittee shall monitor and record the pressure drop across scrubber CE010 at least once per day when the fermentation process is in operation. When, for any one reading, the pressure drop across the scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for these units is a pressure drop between 6.0 and 15.0 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. Failure to take response steps shall be considered a deviation from this permit.

(2) The Permittee shall monitor and record the flow rate of scrubber CE010 at least once per day when the fermentation process is in operation.

(3) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Conditions D.2.1(b) and D.2.2(c).

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

(5) 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. Failure to take response steps shall be considered a deviation from this permit.

The instruments used for determining the pressure drop and flow rate 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.2.7 Scrubber Failure Detection

In the event that a scrubber 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 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 and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.8 Record Keeping Requirements [326 IAC 8-5-6]

(a) To document the compliance status with Condition D.2.6(a), the Permittee shall maintain daily records of pressure drop and flow rate for scrubber CE005. The Permittee shall include in its daily record when a pressure drop or flow rate reading is not taken and the reason for the lack of a pressure drop or flow rate reading (e.g., the process did not operate that day).

(b) To document the compliance status with Condition D.2.6(b), the Permittee shall maintain daily records of pressure drop and flow rate for scrubber CE010. The Permittee shall include in its daily record when a pressure drop or flow rate reading is not taken and the reason for the lack of a pressure drop or flow rate reading (e.g., the process did not operate that day).

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

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS – TO/HRSG System & DDGS Drying

Emissions Unit Description [326 IAC 2-7-5(14)]:

(g) One (1) thermal oxidizer with heat recovery steam generator (TO/HRSG) system, identified as CE007, constructed in 2006, with a maximum heat input capacity of 135 MMBtu/hr, using natural gas and process waste gases from the DDGS dryers as fuels, with emissions exhausted through stack EP007.

Under 40 CFR 60, Subpart Db, CE007 is an affected facility.

(h) One (1) distillation process, constructed in 2006, with a maximum throughput rate of 6,850 gallons of ethanol per hour, controlled by TO/HRSG system CE007, exhausting through stack EP007, and consisting of the following:

(1) Two (2) slurry mixers, identified as EU049 and EU058.

(2) One (1) slurry tank, identified as EU050.

(3) Three (3) liquefaction tanks, identified as EU014, EU051, and EU059, each with a maximum capacity of 7,000 gallons per hour.

(4) One (1) cook tube, identified as EU052.

(5) One (1) flash tank, identified as EU053.

(6) One (1) yeast tank, identified as EU015.

(7) One (1) 190 proof condenser, identified as EU054.

(8) One (1) 200 proof condenser, identified as EU055.

(9) One (1) beer stripper, identified as EU021.

(10) One (1) side stripper, identified as EU022.

(11) One (1) rectifier, identified as EU023.

(12) Molecular sieve units, identified as EU024.

(13) Eight (8) evaporators, identified as EU025.

(14) Four (4) centrifuges, identified as EU026 through EU029.

(15) One (1) slurry tank, identified as EU068, approved for construction in 2010.

(16) One (1) centrifuge, identified as EU069, approved for construction in 2010.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(i) Two (2) natural gas fired DDGS dryers, identified as EU035 and EU056, constructed in 2006, each with a maximum heat input rate of 45 MMBtu/hr and a maximum throughput rate of 34 tons of DDGS per hour, controlled by multiclone CE006, with emissions venting to Thermal

Oxidizer/Heat Recovery Steam Generating (TO/HRSG) System CE007, and exhausting to stack EP007.

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

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

D.3.1 PSD and MACT Minor Limits for PM, PM_{10}, $PM_{2.5}$, VOC, CO, SO_2, NO_x, and HAP [326 IAC 2-2] [326 IAC 2-4.1]

In order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (MACT) not applicable, the Permittee shall comply with the following emission limits for the TO/HRSG System CE007, which is used to control the DDGS dryers (EU035 and EU056) and the distillation process:

(a) PM emissions shall not exceed 8.0 lb/hr.

(b) PM_{10} emissions shall not exceed 8.0 lb/hr.

(c) $PM_{2.5}$ emissions shall not exceed 8.0 lb/hr.

(d) VOC emissions shall not exceed 5.15 lb/hr.

(e) CO emissions shall not exceed 21.0 lb/hr.

(f) SO_2 emissions shall not exceed 8.5 lb/hr.

(g) NO_x emissions shall not exceed 19.7 lb/hr.

(h) Acetaldehyde emissions shall not exceed 0.18 lb/hr.

(i) Total HAP emissions shall not exceed 0.53 lb/hr.

Compliance with these PM, PM_{10}, $PM_{2.5}$, VOC, SO_2, CO, and NO_x limits, combined with the potential to emit PM, PM_{10}, $PM_{2.5}$, VOC, SO_2, CO, and NO_x from other emission units at the source, shall limit the PM, PM_{10}, $PM_{2.5}$, VOC, SO_2, CO, and NO_x emissions from the entire source to less than 250 tons per twelve (12) consecutive month period and render 326 IAC 2-2 (PSD) not applicable.

Compliance with these HAP limits, combined with the potential to emit HAP from other emission units at the source, shall limit the HAP emissions from the entire source to less than 10 tons per twelve (12) consecutive month period for a single HAP and less than 25 tons per twelve (12) consecutive month period for total HAPs and render 326 IAC 2-4.1 (MACT) not applicable.

D.3.2 VOC Emissions [326 IAC 8-5-6]

Pursuant to 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills), the Permittee shall comply with the following:

(a) The VOC emissions from the DDGS dryers (EU035 and EU056) and the distillation process shall be controlled by TO/HRSG system CE007.

(b) The overall efficiency for the thermal oxidizer CE007 (including the capture efficiency and destruction efficiency) shall be at least 98% or the maximum outlet VOC concentration shall not exceed 10 ppmv.

D.3.3 Particulate Emissions [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from the 135 MMBtu/hr TO/HRSG system (CE007) shall be limited to 0.30 pounds per MMBtu heat input.

The limit was calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}} = \frac{1.09}{(135)^{0.26}} = 0.30 \text{ lb/MMBtu}$$

Where: Pt = emission rate limit (lb/MMBtu)
Q = total source heat input capacity (MMBtu/hr)

D.3.4 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from each of following operations shall not exceed the pound per hour limits listed in the table below:

Unit ID	Unit Description	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lb/hr)
EU035	DDGS Dryer	34	41.1
EU056	DDGS Dryer	34	41.1

The pounds per hour limitations were calculated using the following equations:

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

D.3.5 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.3.6 VOC and HAP Control

In order to ensure compliance with Conditions D.3.1(d), D.3.1(h), D.3.1(i), and D.3.2, the TO/HRSG system (CE007) for VOC and HAP control shall be in operation and control emissions from the DDGS dryers (EU035 and EU056) and the distillation process at all times that these units are in operation.

D.3.7 Particulate Control

In order to ensure compliance with Conditions D.3.1(a), D.3.1(b), D.3.1(c), and D.3.4, the cyclone (CE006) for particulate control shall be in operation and control emissions from the DDGS Dryers (EU035 and EU056) at all times these units are in operation.

D.3.8 Testing Requirements [326 IAC 2-1.1-11] [326 IAC 8-5-6]

In order to demonstrate compliance with Conditions D.3.1, D.3.2, D.3.3, and D.3.4, the Permittee shall perform PM, PM_{10}, $PM_{2.5}$, VOC (including emission rate, destruction efficiency, and capture efficiency), SO_2, CO, NO_x, acetaldehyde, and total HAP testing of thermal oxidizer CE007 utilizing methods as approved by the Commissioner at least once every five (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. PM_{10} and $PM_{2.5}$ includes filterable and condensible PM.

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

D.3.9 Visible Emissions Notations

(a) Visible emission notations of the stack exhaust from the TO/HRSG system stack EP007 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 reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.3.10 Thermal Oxidizer Temperature [326 IAC 8-5-6]

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the TO/HRSG system (CE007) for measuring operating temperature. For the purpose of this condition, continuous means no less often than once per fifteen (15) minute. The output of this system shall be recorded as a 3-hour average.

(b) The Permittee shall determine the 3-hour average temperature from the latest valid stack test that demonstrates compliance with the limits in Conditions D.3.1 and D.3.2.

(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. Failure to take response steps shall be considered a deviation from this permit.

D.3.11 Parametric Monitoring [326 IAC 8-5-6]

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the TO/HRSG system (CE007) for measuring the duct pressure or fan amperage. 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 a 3-hour average.

(b) The Permittee shall determine the appropriate 3-hour average duct pressure or fan amperage from the latest valid stack test that demonstrates compliance with the limits in Conditions D.3.1 and D.3.2.

(c) On and after the date the stack test results are available, the 3-hour average duct pressure or fan amperage shall be maintained within the 3-hour average normal range as established in the latest compliant stack test.

(d) When, for any one reading, the 3-hour average duct pressure or fan amperage is outside the above mentioned 3-hour average ranges, the Permittee shall take a reasonable response. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.3.12 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 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 and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.13 Record Keeping Requirements [326 IAC 8-5-6]

(a) To document the compliance status with Condition D.3.9, the Permittee shall maintain records of daily visible emission notations of stack EP007. 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).

(b) To document the compliance status with Condition D.3.10, the Permittee shall maintain continuous temperature records for the thermal oxidizer and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.

(c) To document the compliance status with Condition D.3.11, the Permittee shall maintain continuous duct pressure or fan amperage records for the TO/HRSG system CE007 and the 3-hour average duct pressure or fan amperage used to demonstrate compliance during the most recent compliant stack test.

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

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS – DDGS Cooler

Emissions Unit Description [326 IAC 2-7-5(14)]:

(j) One (1) DDGS cooler, identified as EU036, constructed in 2006, with a maximum throughput rate of 34 tons/hr of DDGS, controlled by baghouse CE014, and exhausting to stack EP014.

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

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

D.4.1 PSD and MACT Minor Limits for PM, PM_{10}, $PM_{2.5}$, and HAP [326 IAC 2-2] [326 IAC 2-4.1]

In order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (MACT) not applicable, the Permittee shall comply with the following emission limit for DDGS Cooler (EU036), which is controlled by baghouse CE014:

(a) PM emissions shall not exceed 0.94 lb/hr.

(b) PM_{10} emissions shall not exceed 0.94 lb/hr.

(c) $PM_{2.5}$ emissions shall not exceed 0.94 lb/hr.

(d) The total DDGS produced shall not exceed 210,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month, and VOC emissions from DDGS cooler EU036 shall not exceed 0.065 pounds per ton of DDGS produced.

(e) Acetaldehyde emissions shall not exceed 0.075 lb/hr.

Compliance with these PM, PM_{10}, $PM_{2.5}$, and VOC limits, combined with the potential to emit PM, PM_{10}, $PM_{2.5}$, and VOC from other emission units at the source, shall limit the PM, PM_{10}, $PM_{2.5}$, and VOC emissions from the entire source to less than 250 tons per twelve (12) consecutive month period and render 326 IAC 2-2 (PSD) not applicable.

Compliance with these HAP limits, combined with the potential to emit HAP from other emission units at the source, shall limit the HAP emissions from the entire source to less than 10 tons per twelve (12) consecutive month period for a single HAP and less than 25 tons per twelve (12) consecutive month period for total HAPs and render 326 IAC 2-4.1 (MACT) not applicable.

D.4.2 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, particulate emissions from the DDGS cooler (EU036) shall not exceed 41.06 pounds per hour when operating at the maximum process throughput rate of 34 tons per hour.

The pounds per hour limitation was calculated using the following equation:

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

D.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.4.4 Particulate Control

In order to ensure compliance with Conditions D.4.1(a), D.4.1(b), and D.4.1(c), baghouse CE014 for particulate control shall be in operation and control emissions from the DDGS Cooler (EU036) at all times that this unit is in operation.

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.4.5 Testing Requirements [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.4.1 and D.4.2, the Permittee shall perform PM, PM_{10}, $PM_{2.5}$, VOC, and acetaldehyde testing of the DDGS Cooler (EU036) utilizing methods as approved by the Commissioner at least once every five (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. PM_{10} and $PM_{2.5}$ includes filterable and condensible PM.

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

D.4.6 Visible Emissions Notations

(a) Visible emission notations of the baghouse CE014 stack exhaust 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 reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.4.7 Parametric Monitoring

The Permittee shall record the pressure drop across baghouse CE014 at least once per day when the associated emission unit 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 1.0 and 6.0 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 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.4.8 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).

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

D.4.9 Record Keeping Requirements

(a) To document the compliance status with Condition D.4.1(d), the Permittee shall maintain monthly records of the amount of DDGS produced.

(b) To document the compliance status with Condition D.4.6, the Permittee shall maintain records of daily visible emission notations of the baghouse 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 process did not operate that day).

(c) To document the compliance status with Condition D.4.7, the Permittee shall maintain daily records of the pressure drop across the baghouse. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the process did not operate that day).

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

D.4.10 Reporting Requirements

A quarterly report of DDGS production to document the compliance status with Condition D.4.1(d) 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 obligations 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.5 EMISSIONS UNIT OPERATION CONDITIONS – Ethanol Loading Racks

Emissions Unit Description [326 IAC 2-7-5(14)]:

(l) One (1) ethanol loading rack for trucks, identified as EU045A, constructed in 2006, with a maximum throughput rate of 800 gallons per minute. The truck loading process is controlled by the enclosed flare CE009, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP009.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(m) One (1) ethanol loading rack for railcars, identified as EU045B, constructed in 2006, with a maximum throughput rate of 1000 gallons per minute. The railcar loading process is controlled by the enclosed flare CE009, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP009.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

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

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

D.5.1 PSD and MACT Minor Limits for VOC, CO, NO_x, and HAP [326 IAC 2-2] [326 IAC 2-4.1]

In order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (MACT) not applicable, the Permittee shall comply with the following emission limits for the loading racks EU045A and EU045B:

(a) The total combined denatured ethanol and blended ethanol load-out from loading racks EU045A and EU045B shall not exceed 64,900,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total denaturant used at the loading racks EU045A and EU045B shall not exceed 4,900,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The blended ethanol shall not exceed a blend of 30% gasoline.

(d) CO emissions from flare CE009, controlling ethanol loading racks EU045A and EU045B, shall not exceed 0.129 lb/kgal.

(e) NO_x emissions from flare CE009, controlling ethanol loading racks EU045A and EU045B, shall not exceed 0.077 lb/kgal.

Compliance with these VOC, CO, and NO_x limits, combined with the potential to emit VOC, CO, and NO_x from other emission units at the source, shall limit the VOC, CO, and NO_x emissions from the entire source to less than 250 tons per twelve (12) consecutive month period and render 326 IAC 2-2 (PSD) not applicable.

Compliance with these HAP limits, combined with the potential to emit HAP from other emission units at the source, shall limit the HAP emissions from the entire source to less than 10 tons per

twelve (12) consecutive month period for a single HAP and less than 25 tons per twelve (12) consecutive month period for total HAPs and render 326 IAC 2-4.1 (MACT) not applicable.

D.5.2 VOC Emissions [326 IAC 8-5-6]

Pursuant to 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills), the Permittee shall comply with the following:

(a) The VOC emissions from the ethanol loading rack for trucks (EU045) shall be collected and controlled by enclosed flare CE009.

(b) The VOC emissions from the ethanol loading rack for railcars (EU045B) shall be collected and controlled by enclosed flare CE009.

(c) The overall efficiency for the enclosed flare CE009 (including the capture efficiency and destruction efficiency), shall be at least 98%.

D.5.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.5.4 VOC and HAP Control

In order to ensure compliance with Conditions D.5.1 and D.5.2 for VOC and HAP control:

(a) Enclosed flare CE009 shall be in operation and control emissions from the ethanol loading racks (EU045A and EU045B) at all times when these racks are in operation.

(b) The ethanol loading racks (EU045A and EU045B) shall utilize submerged loading method.

(c) The railcars and trucks shall not use vapor balance services.

D.5.5 Testing Requirements [326 IAC 2-1.1-11] [326 IAC 8-5-6]

In order to demonstrate compliance with Conditions D.5.1 and D.5.2, the Permittee shall perform VOC (including emission rate, capture efficiency, and destruction efficiency), CO, and NO_x testing of enclosed flare CE009 utilizing methods as approved by the Commissioner at least once every five (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.

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

D.5.6 Flare Pilot Flame [326 IAC 8-5-6]

In order to ensure compliance with Conditions D.5.1 and D.5.2, the Permittee shall monitor the presence of a flare pilot flame using a thermocouple or any other equivalent device to detect the presence of a flame when ethanol loading racks EU045A and/or EU045B are in operation.

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

D.5.7 Record Keeping Requirements [326 IAC 8-5-6]

(a) To document the compliance status with Condition D.5.1(a), the Permittee shall maintain monthly records of the total amount of denatured ethanol and blended ethanol loaded out from loading racks EU045A and EU045B.

(b) To document the compliance status with Condition D.5.1(b), the Permittee shall maintain monthly records of total denaturant used at loading racks EU045A and EU045B.

(c) To document the compliance status with Condition D.5.1(c), the Permittee shall maintain monthly records of the specifications of the blended ethanol loaded out to truck and rail.

(d) To document the compliance status with Condition D.5.6, the Permittee shall maintain records of temperature or other parameters sufficient to demonstrate the presence of a pilot flame when loading racks EU045A and/or EU045B are in operation.

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

D.5.8 Reporting Requirements

A quarterly report of the information to document the compliance status with Condition D.5.1(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 obligations with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official,” as defined by 326 IAC 2-7-1(35).

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS – Insignificant Activities

Emissions Unit Description [326 IAC 2-7-5(14)]:

(j) Stationary fire pumps, including one (1) emergency diesel fire pump, identified as EU034, constructed in 2006, with a maximum power rating of 350 horsepower, and exhausting to stack EP006. [326 IAC 2-2]

Under 40 CFR Part 63, Subpart ZZZZ, EU034 is an affected unit.

(k) Other emission units, not regulated by a NESHAP, with PM_{10}, NO_x, and SO_2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(3) One (1) denaturant tank, identified as T003, constructed in 2006, with a maximum capacity of 100,000 gallons. [326 IAC 8-4-3]

Under 40 CFR 60, Subpart Kb, T003 is an affected facility.

(7) One (1) gasoline storage tank, identified as T008, approved for construction in 2010, with a maximum capacity of 350 gallons of gasoline, and exhausting to the atmosphere. [326 IAC 8-4-6] [326 IAC 8-4-9]

Under 40 CFR 63, Subpart CCCCCC, T008 is an affected facility.

(10) One (1) biomethanator, identified as EU048, constructed in 2006, controlled by 6.0 MMBtu/hr biomethanator flare CE013, and exhausting to stack EP013. [326 IAC 2-2]

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

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

D.6.1 PSD Minor Limits for CO and NO_x [326 IAC 2-2]

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

(a) The operating hours for the emergency diesel fire pump (EU034) shall not exceed 500 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The biomethanator flare (CE013) shall not operate when any of the DDGS dryers (EU035 and EU056) are in operation.

Compliance with these CO and NO_x limits, combined with the potential to emit CO and NO_x from other emission units at the source, shall limit the CO and NO_x emissions from the entire source to less than 250 tons per twelve (12) consecutive month period and render 326 IAC 2-2 (PSD) not applicable.

D.6.2 Volatile Organic Compounds (VOC) [326 IAC 8-4-3(d)]

Pursuant to 326 IAC 8-4-3(d) (Petroleum Liquid Storage Facilities), the Permittee shall maintain the following records for a period of two (2) years for tank T003:

(a) The types of volatile petroleum liquid stored;

(b) The maximum true vapor pressure of the liquids as stored; and

(c) The results of the inspections performed on the storage vessels.

The above records shall be made available to the IDEM, OAQ upon written request.

D.6.3 Avoidance Limit for VOC [326 IAC 8-4-6] [326 IAC 8-4-9]

In order to render the requirements of 326 IAC 8-4-6 and 326 IAC 8-4-9 not applicable to the storage tank identified as T008, the monthly gasoline throughput from the storage tank shall not exceed 10,000 gallons per month. Compliance with the above limit will render the requirements of 326 IAC 8-4-6 and 326 IAC 8-4-9 not applicable to the storage tank.

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

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

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

D.6.5 Flare Pilot Flame [326 IAC 8-5-6]

In order to comply with Conditions D.6.1, the Permittee shall monitor the presence of a flare pilot flame using a thermocouple or any other equivalent device to detect the presence of a flame when the biomethanator is in operation.

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

D.6.6 Record Keeping Requirements

(a) To document the compliance status with Condition D.6.1(a), the Permittee shall maintain monthly records of the operating hours for the emergency diesel fire pump (EU034).

(b) To document the compliance status with Condition D.6.2, the Permittee shall maintain the following records for a period of two (2) years for tank T003:

(1) The types of volatile petroleum liquid stored;

(2) The maximum true vapor pressure of the liquids as stored; and

(3) The results of the inspections performed on the storage vessels.

(c) To document the compliance status with Condition D.6.3, the Permittee shall maintain monthly records of the gasoline throughput from the storage tank identified as T008.

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

D.6.7 Reporting Requirements

A quarterly report of the information to document the compliance status with Condition D.6.1(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 obligations with regard to the reporting

required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1(35).

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS – Non-Fuel Grade Ethanol

Emissions Unit Description [326 IAC 2-7-5(14)]:

(n) One (1) distillation process, approved in 2013 for construction, with a maximum throughput rate of 40,000 gallons of non-fuel grade ethanol per hour, consisting of the following:

(1) Three (3) distillation columns and seven (7) condensers operating in a close loop.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(2) Two (2) liquid storage tanks, identified as T013 and T014, each with a maximum capacity of 500,000 gallons.

Under 40 CFR 60, Subpart Kb, T013 and T014 are affected facilities.

(3) Three (3) liquid storage tanks, identified as T015, T016, and T017, each with a maximum capacity of 24,000 gallons.

Under 40 CFR 60, Subpart Kb, T015, T016, and T017 are affected facilities.

(4) Two (2) natural gas fired boilers, identified as Boiler #1 (EU081) and Boiler #2 (EU082), each with a maximum heat input rate of 48.16 MMBtu/hr, exhausting uncontrolled to stacks EP020 and EP021, respectively.

Under 40 CFR 60, Subpart Dc, EU081 and EU082 are affected facilities.

(o) One (1) non-fuel grade ethanol loading skid for trucks, identified as EU083, approved in 2013 for construction, with a maximum throughput rate of 1000 gallons per minute. The truck loading process is controlled by the enclosed flare CE019, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP019.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(p) One (1) non-fuel grade ethanol loading skid for railcars, identified as EU084, approved in 2013 for construction, with a maximum throughput rate of 1667 gallons per minute. The railcar loading process is controlled by the enclosed flare CE019, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP019.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

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

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

D.7.1 Minor Limits for VOC, CO, NO_x, and HAP [326 IAC 2-2] [326 IAC 2-4.1] [Clean Air Act, Section 112(a)(1) and (a)(2)]

In order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (MACT) not

applicable, the Permittee shall comply with the following emission limits for the loading skids EU083 and EU084:

(a) The potential emissions of cumulative HAPs shall be limited to no more than 3.85 tons per year from Tanks T013 through T017 and shall be limited to any single HAP or combination of these HAPs: benzene, chloroform, dimethyl phthalate, methyl isobutyl ketone, and toluene.

(b) The total combined non-fuel grade ethanol load-out from loading skids EU083 and EU084 shall not exceed 60,000,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) CO emissions from flare CE019, controlling ethanol loading skids EU083 and EU084, shall not exceed 0.129 lb/kgal.

(d) NO_x emissions from flare CE019, controlling ethanol loading skids EU083 and EU084, shall not exceed 0.077 lb/kgal.

Compliance with these VOC, CO, and NO_x limits, combined with the potential to emit VOC, CO, and NO_x from other emission units at the source, shall limit the VOC, CO, and NO_x emissions from the entire source to less than 250 tons per twelve (12) consecutive month period and render 326 IAC 2-2 (PSD) not applicable.

Compliance with these HAP limits, combined with the potential to emit HAP from other emission units at the source, shall limit the HAP emissions from the entire source to less than 10 tons per twelve (12) consecutive month period for a single HAP and less than 25 tons per twelve (12) consecutive month period for total HAPs and render 326 IAC 2-4.1 (MACT) not applicable.

D.7.2 Particulate Emissions [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from the 48.16 MMBtu/hr Boiler #1 (EU081) and Boiler #2 (EU082) shall be limited to 0.26 pounds per MMBtu heat input, each.

The limit was calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}} = \frac{1.09}{(231.32)^{0.26}} = 0.26 \text{ lb/MMBtu}$$

Where: Pt = emission rate limit (lb/MMBtu)
Q = total source heat input capacity (MMBtu/hr)

D.7.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.7.4 VOC and HAP Control

In order to comply with Condition D.7.1 for VOC and HAP control:

(a) Enclosed flare CE019 shall be in operation and control emissions from the non-fuel grade ethanol loading skids (EU083 and EU084) at all times when these skids are in operation.

(b) The ethanol loading skids (EU083 and EU084) shall utilize submerged loading method.

(c) The railcars and trucks shall not use vapor balance services.

D.7.5 VOC and HAP

In order to determine compliance with the VOC and HAP emissions limits in Condition D.7.1(a), the VOC and HAP emissions from the tank storage and tank filling of Tanks T013 through T017 shall be calculated using USEPA's TANKS program (version 4.0 or its updates).

D.7.6 Testing Requirements [326 IAC 2-1.1-11]

Not later than 180 days after the startup of the closed-loop distillation process, the Permittee shall perform VOC (including emission rate, capture efficiency, and destruction efficiency), CO, and NO_x testing of enclosed flare CE019 utilizing methods as approved by the Commissioner at least once every five (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.

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

D.7.7 Flare Pilot Flame

In order to comply with Condition D.7.1, the Permittee shall monitor the presence of a flare pilot flame using a thermocouple or any other equivalent device to detect the presence of a flame when ethanol loading skids EU083 and/or EU084 are in operation.

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

D.7.8 Record Keeping Requirements

(a) To document the compliance status with Condition D.7.1(b), the Permittee shall maintain monthly records of the total amount of non-fuel grade ethanol loaded out from loading racks EU083 and EU084.

(b) To document the compliance status with Condition D.7.6, the Permittee shall maintain records of temperature or other parameters sufficient to demonstrate the presence of a pilot flame when loading skids EU083 and/or EU084 are in operation.

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

D.7.9 Reporting Requirements

A quarterly report of the non-fuel grade ethanol loading to document the compliance status with Condition D.7.1(b) 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 obligations 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 E.1 FACILITY OPERATION CONDITIONS - 40 CFR 60, Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

Facility Description [326 IAC 2-7-5(14)]:

(g) One (1) thermal oxidizer with heat recovery steam generator (TO/HRSG) system, identified as CE007, constructed in 2006, with a maximum heat input capacity of 135 MMBtu/hr, using natural gas and process waste gases from the DDGS dryers as fuels, with emissions exhausted through stack EP007.

Under 40 CFR 60, Subpart Db, CE007 is an affected facility.

(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

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

(a) 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, for the Industrial-Commercial-Institutional Steam Generating Units, as specified in 40 CFR 60, Subpart Db in accordance with the schedule in 40 CFR 60, Subpart Db.

(b) Pursuant to 40 CFR 60.19, 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 Ave.
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.1.2 Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units [40 CFR 60, Subpart Db] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart Db (included as Attachment B) which are incorporated by reference as 326 IAC 12 for the Industrial-Commercial-Institutional Steam Generating Units:

(a) 40 CFR 60.40b;
(b) 40 CFR 60.41b;
(c) 40 CFR 60.44b;
(d) 40 CFR 60.46b;
(e) 40 CFR 60.48b; and
(f) 40 CFR 60.49b.

SECTION E.2 FACILITY OPERATION CONDITIONS - 40 CFR 60, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984

Facility Description [326 IAC 2-7-5(14)]:

(n) One (1) distillation process, approved in 2013 for construction, with a maximum throughput rate of 40,000 gallons of non-fuel grade ethanol per hour, consisting of the following:

(2) Two (2) liquid storage tanks, identified as T013 and T014, each with a maximum capacity of 500,000 gallons.

Under 40 CFR 60, Subpart Kb, T013 and T014 are affected facilities.

(3) Three (3) liquid storage tanks, identified as T015, T016, and T017, each with a maximum capacity of 24,000 gallons.

Under 40 CFR 60, Subpart Kb, T015, T016, and T017 are affected facilities.

Insignificant Activities

(k) Other emission units, not regulated by a NESHAP, with PM_{10}, NO_x, and SO_2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(1) One (1) 190 proof tank, identified as T001, constructed in 2006, with a maximum capacity of 100,000 gallons.

Under 40 CFR 60, Subpart Kb, T001 is an affected facility.

(2) One (1) 200 proof tank, identified as T002, constructed in 2006, with a maximum capacity of 100,000 gallons.

Under 40 CFR 60, Subpart Kb, T002 is an affected facility.

(3) One (1) denaturant tank, identified as T003, constructed in 2006, with a maximum capacity of 100,000 gallons. [326 IAC 8-4-3]

Under 40 CFR 60, Subpart Kb, T003 is an affected facility.

(4) Two (2) denatured ethanol tanks, identified as T004 and T005, constructed in 2006, each with a maximum capacity of 750,000 gallons.

Under 40 CFR 60, Subpart Kb, T004 and T005 are affected facilities.

(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

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

(a) 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, for the Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984, as specified in 40 CFR 60, Subpart Kb in accordance with the schedule in 40 CFR 60, Subpart Kb.

(b) Pursuant to 40 CFR 60.19, 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 Ave.
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.2.2 Standards of Performance for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984 [40 CFR 60, Subpart Kb] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart Kb (included as Attachment C) which are incorporated by reference as 326 IAC 12 for the Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984:

(a) 40 CFR 60.110b (a), (b), (d)(2), (d)(3), (d)(7), (d)(8), (e)(1)(i), (e)(2), (e)(3);
(b) 40 CFR 60.111b;
(c) 40 CFR 60.112b(a)(1);
(d) 40 CFR 60.113b(a);
(e) 40 CFR 60.115b(a);
(f) 40 CFR 60.116b(a), (b), (c), (e) ; and
(g) 40 CFR 60.117b.

SECTION E.3 FACILITY OPERATION CONDITIONS - 40 CFR 60, Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006

Facility Description [326 IAC 2-7-5(14)]:

(f) One (1) fermentation process, constructed in 2006, with a maximum throughput rate of 7,060 gallons of ethanol per hour, controlled by CO_2 wet scrubbers CE005 (vented to stack EP005) and CE010 (vented to stack EP010), and consisting of the following:

(1) Four (4) fermenters, identified as EU016, EU017, EU018, and EU019.

(2) One (1) beer well, identified as EU020.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(h) One (1) distillation process, constructed in 2006, with a maximum throughput rate of 6,850 gallons of ethanol per hour, controlled by TO/HRSG system CE007, exhausting through stack EP007, and consisting of the following:

(1) Two (2) slurry mixers, identified as EU049 and EU058.

(2) One (1) slurry tank, identified as EU050.

(3) Three (3) liquefaction tanks, identified as EU014, EU051, and EU059, each with a maximum capacity of 7,000 gallons per hour.

(4) One (1) cook tube, identified as EU052.

(5) One (1) flash tank, identified as EU053.

(6) One (1) yeast tank, identified as EU015.

(7) One (1) 190 proof condenser, identified as EU054.

(8) One (1) 200 proof condenser, identified as EU055.

(9) One (1) beer stripper, identified as EU021.

(10) One (1) side stripper, identified as EU022.

(11) One (1) rectifier, identified as EU023.

(12) Molecular sieve units, identified as EU024.

(13) Eight (8) evaporators, identified as EU025.

(14) Four (4) centrifuges, identified as EU026 through EU029.

(15) One (1) slurry tank, identified as EU068, approved for construction in 2010.

(16) One (1) centrifuge, identified as EU069, approved for construction in 2010.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(l) One (1) ethanol loading rack for trucks, identified as EU045A, constructed in 2006, with a maximum throughput rate of 800 gallons per minute. The truck loading process is controlled by the enclosed flare CE009, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP009.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(m) One (1) ethanol loading rack for railcars, identified as EU045B, constructed in 2006, with a maximum throughput rate of 1000 gallons per minute. The railcar loading process is controlled by the enclosed flare CE009, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP009.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(n) One (1) distillation process, approved in 2013 for construction, with a maximum throughput rate of 40,000 gallons of non-fuel grade ethanol per hour, consisting of the following:

(1) Three (3) distillation columns and seven (7) condensers operating in a close loop.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(o) One (1) non-fuel grade ethanol loading skid for trucks, identified as EU083, approved in 2013 for construction, with a maximum throughput rate of 1000 gallons per minute. The truck loading process is controlled by the enclosed flare CE019, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP019.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(p) One (1) non-fuel grade ethanol loading skid for railcars, identified as EU084, approved in 2013 for construction, with a maximum throughput rate of 1667 gallons per minute. The railcar loading process is controlled by the enclosed flare CE019, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP019.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(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

E.3.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR 60, Subpart A]

(a) 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, for the sources of equipment leaks of VOC, as specified in 40 CFR 60, Subpart VVa in accordance with the schedule in 40 CFR 60, Subpart VVa.

(b) Pursuant to 40 CFR 60.19, 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 Ave.
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.3.2 Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 [40 CFR 60, Subpart VVa] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart VVa (included as Attachment D) which are incorporated by reference as 326 IAC 12 for the sources of equipment leaks of VOC:

(a) 40 CFR 60.480a;
(b) 40 CFR 60.481a;
(c) 40 CFR 60.482-1a;
(d) 40 CFR 60.482-2a;
(e) 40 CFR 60.482-3a;
(f) 40 CFR 60.482-4a;
(g) 40 CFR 60.482-5a;
(h) 40 CFR 60.482-6a;
(i) 40 CFR 60.482-7a;
(j) 40 CFR 60.482-8a;
(k) 40 CFR 60.482-9a;
(l) 40 CFR 60.482-10a;
(m) 40 CFR 60.482-11a;
(n) 40 CFR 60.483-1a;
(o) 40 CFR 60.483-2a;
(p) 40 CFR 60.484a;
(q) 40 CFR 60.485a;
(r) 40 CFR 60.486a;
(s) 40 CFR 60.487a;
(t) 40 CFR 60.488a; and
(u) 40 CFR 60.489a.

SECTION E.4 FACILITY OPERATION CONDITIONS – 40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Facility Description [326 IAC 2-7-5(14)]:

Insignificant Activities

(j) Stationary fire pumps, including one (1) emergency diesel fire pump, identified as EU034, constructed in 2006, with a maximum power rating of 350 horsepower, and exhausting to stack EP006. [326 IAC 2-2]

Under 40 CFR Part 63, Subpart ZZZZ, EU034 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

E.4.1 General Provisions Relating to National Emissions Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-82] [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 20-82, for the reciprocating internal combustion engines 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.4.2 National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment E) which are incorporated by reference as 326 IAC 20-82 for the reciprocating internal combustion engines:

(a) 40 CFR 63.6580;
(b) 40 CFR 63.6585(a), (c), (d);
(c) 40 CFR 63.6590(a)(1)(iii), (a)(1)(iv);
(d) 40 CFR 63.6595(a)(1), (b), (c);
(e) 40 CFR 63.6603;
(f) 40 CFR 63.6605;
(g) 40 CFR 63.6625(e)(3), (f), (h), (i);
(h) 40 CFR 63.6635;
(i) 40 CFR 63.6640;
(j) 40 CFR 63.6645(a)(5);
(k) 40 CFR 63.6650;
(l) 40 CFR 63.6655;
(m) 40 CFR 63.6660;
(n) 40 CFR 63.6665;

(o) 40 CFR 63.6670;
(p) 40 CFR 63.6675;
(q) Table 2d (item 4);
(r) Table 6 (item 9); and
(s) Table 8.

SECTION E.5 FACILITY OPERATION CONDITIONS – 40 CFR 63, Subpart CCCCCC - National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

Facility Description [326 IAC 2-7-5(14)]:

Insignificant Activities

(k) Other emission units, not regulated by a NESHAP, with PM10, NOx, and SO_2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(7) One (1) gasoline storage tank, identified as T008, approved for construction in 2010, with a maximum capacity of 350 gallons of gasoline, and exhausting to the atmosphere.

Under 40 CFR 63, Subpart CCCCCC, T008 is an affected facility.

(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

E.5.1 General Provisions Relating to National Emissions Standards for Hazardous Air Pollutants under 40 CFR Part 63 [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.11110, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions for the gasoline dispensing facilities as specified in 40 CFR Part 63, Subpart CCCCCC in accordance with the schedule in 40 CFR 63, Subpart CCCCCC.

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

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

E.5.2 National Emissions Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities [40 CFR Part 63, Subpart CCCCCC]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart CCCCCC (included as Attachment F) for the gasoline dispensing facilities:

(a) 40 CFR 63.11110;
(b) 40 CFR 63.11111(a), (b), (e), (h), (i), (j);
(c) 40 CFR 63.11112(a), (d);
(d) 40 CFR 63.11113(b), (c);
(e) 40 CFR 63.11115;
(f) 40 CFR 63.11116;

(g) 40 CFR 63.11125(d);
(h) 40 CFR 63.11126(b);
(i) 40 CFR 63.11130;
(j) 40 CFR 63.11131; and
(k) 40 CFR 63.11132.

SECTION E.6 FACILITY OPERATION CONDITIONS - 40 CFR 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Facility Description [326 IAC 2-7-5(14)]:

(n) One (1) distillation process, approved in 2013 for construction, with a maximum throughput rate of 40,000 gallons of non-fuel grade ethanol per hour, consisting of the following:

(4) Two (2) natural gas fired boilers, identified as Boiler #1 (EU081) and Boiler #2 (EU082), each with a maximum heat input rate of 48.16 MMBtu/hr, exhausting uncontrolled to stacks EP020 and EP021, respectively.

Under 40 CFR 60, Subpart Dc, EU081 and EU082 are affected facilities.

(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

E.6.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR 60, Subpart A]

(a) 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, for the Small Industrial-Commercial-Institutional Steam Generating Units, as specified in 40 CFR 60, Subpart Dc in accordance with the schedule in 40 CFR 60, Subpart Dc.

(b) Pursuant to 40 CFR 60.19, 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 Ave.
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.6.2 Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR 60, Subpart Dc] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart Dc (included as Attachment G) which are incorporated by reference as 326 IAC 12 for the Small Industrial-Commercial-Institutional Steam Generating Units:

(a) 40 CFR 60.40c(a), (b), (c), (d);
(b) 40 CFR 60.41c; and
(c) 40 CFR 60.48c(a), (f)(4), (g), (i), (j).

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

Source Name: Central Indiana Ethanol, LLC
Source Address: 2955 West Delphi Pike, Marion, Indiana 46952
Part 70 Permit No.: T053-32070-00062

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: Central Indiana Ethanol, LLC
Source Address: 2955 West Delphi Pike, Marion, Indiana 46952
Part 70 Permit No.: T053-32070-00062

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: Central Indiana Ethanol, LLC
Source Address: 2955 West Delphi Pike, Marion, Indiana 46952
Part 70 Permit No.: T053-32070-00062
Facility: Loading Racks (EU083 and EU084)
Parameter: Total combined non-fuel grade ethanol loadout rate
Limit: The total combined non-fuel grade ethanol load-out from loading skids EU083 and EU084 shall not exceed 60,000,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

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: Central Indiana Ethanol, LLC.
Source Address: 2955 W. Delphi Pike, Marion, Indiana 46952
Part 70 Permit No.: T053-32070-00062
Facility: DDGS Cooler (EU036)
Parameter: DDGS Production Rate
Limit: The total DDGS produced shall not exceed 210,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

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: Central Indiana Ethanol, LLC.
Source Address: 2955 W. Delphi Pike, Marion, Indiana 46952
Part 70 Permit No.: T053-32070-00062
Facility: Ethanol Loading Racks (EU045A and EU045B)
Parameter: Total combined denatured ethanol and blended ethanol loadout rate
Limit: The total combined denatured ethanol and blended ethanol load-out from loading racks EU045A and EU045B shall not exceed 64,900,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

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: Central Indiana Ethanol, LLC.
Source Address: 2955 W. Delphi Pike, Marion, Indiana 46952
Part 70 Permit No.: T053-32070-00062
Facility: Ethanol Loading Racks (EU045A and EU045B)
Parameter: Total denaturant used
Limit: The total denaturant used at the loading racks EU045A and EU045B shall not exceed 4,900,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

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: Central Indiana Ethanol, LLC.
Source Address: 2955 W. Delphi Pike, Marion, Indiana 46952
Part 70 Permit No.: T053-32070-00062
Facility: Emergency Diesel Fire Pump (EU034)
Parameter: Operating Hours
Limit: The operating hours for the emergency diesel fire pump (EU034) shall not exceed 500 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

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 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Central Indiana Ethanol, LLC
Source Address: 2955 West Delphi Pike, Marion, Indiana 46952
Part 70 Permit No.: T053-32070-00062

Months: _____ to _____ Year: _____

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

□ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

□ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

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:	
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: _____

Indiana Department of Environmental Management
Office of Air Quality

Attachment A

Fugitive Dust Control Plan
Central Indiana Ethanol, LLC

FUGITIVE DUST CONTROL PLAN
CENTRAL INDIANA ETHANOL, LLC
2955 WEST DELPHI PIKE
MARION, INDIANA 46952

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Attachment 1 – Fugitive Dust Site Plan

FUGITIVE DUST CONTROL PLAN
CENTRAL INDIANA ETHANOL, LLC
2955 WEST DELPHI PIKE
MARION, INDIANA 46952

INTRODUCTION

Central Indiana Ethanol, LLC (CIE) has prepared this fugitive dust control plan (FDCP) in order to satisfy the regulatory requirements codified in Title 326 of the Indiana Administrative Code Article 6 Rule 5 (326 IAC 6-5). The purpose of this FDCP is to ensure that reasonable control measures (RCM) are utilized at the facility to minimize the quantity of fugitive dust generated at the source. Fugitive dust is defined as particulate matter which is emitted from any source by means other than a stack. The FDCP includes the descriptions of all processes which have the potential to emit fugitive dust, the locations of the potential fugitive emission units, descriptions of the control measures to be implemented, a schedule of compliance and record keeping requirements of the FDCP.

SOURCE DESCRIPTION

CIE owns and operates a stationary ethanol production plant located in Grant County, Indiana. The facility receives corn by truck and railcar for storage and processing into fuel ethanol. CIE also receives denaturant, bulk chemicals, equipment and miscellaneous maintenance products by truck and ships dried distiller's grains with solubles (DDGS) and denatured ethanol off-site by truck and railcar. CIE consists of the following operations: grain receiving and handling operations; fermentation and distillation processes; DDGS dryers, coolers and load-out operations; truck and railcar ethanol loading racks and paved and unpaved roads and parking lots. Grant County is classified as attainment for particulate matter with aerodynamic diameter less than 10 microns (PM10), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), carbon monoxide (CO),

ozone (O_3) and lead (Pb). CIE currently operates baghouses to control fugitive dust emissions generated in the grain receiving and handling operations and DDGS cooling and load-out operations. Fugitive emissions are also produced from the facility's paved and unpaved roads and parking lots.

REGULATORY OVERVIEW

Pursuant to 326 IAC 6-5, any source which has the potential to emit greater than twenty-five (25) tons per year of fugitive particulate matter emissions shall prepare and submit a FDCP to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The FDCP shall include the name and address of the source; name and address of the owner and operator responsible for the execution of the FDCP; identification of all processes, operations and areas which have the potential to emit fugitive dust; a map of the source showing potential fugitive emission units; the descriptions and quantities of vehicular traffic and materials handled at the source; equipment used to maintain storage piles; measures to be implemented to control fugitive dust; specifications of the dust suppressant material or dust collection equipment used to control fugitive emissions; schedule of compliance; and, record keeping requirements.

FUGITIVE DUST PLAN

CIE currently operates grain receiving and handling operations and DDGS cooling and load-out operations and associated baghouses that have the potential to generate fugitive emissions. Fugitive emissions are also produced from the facility's paved and unpaved roads and parking lots. A site map indicating the locations of CIE's processes that emit fugitive emissions is provided in Attachment 1.

FACILITY INFORMATION

Source Address: Central Indiana Ethanol, LLC
2955 West Delphi Pike
Marion, Indiana 46952
Source Owner/Operator Responsible for Execution of FDCP:
Mr. Norm Currey, EH&S Officer

Grain Receiving and Handling Operations

Description of Emission Unit

CIE operates a truck and railcar grain receiving and handling operation that consists of a corn conveyor, a corn elevator, corn storage bins, a scalper, surge bin, and hammermills. The truck and railcar grain receiving operation is located within a building enclosure that is open at each end. Corn is transported on site via railcar and truck. Each railcar and truck is weighed prior to unloading the corn into one of three corn dump pits. The corn dump pits are controlled by a baghouse, identified as CE001. The corn is then conveyed using the grain conveyor and elevator into one of the corn storage bins to eventually be processed through the scalper and hammermills. The scalper and hammermills are controlled by a baghouse, identified as CE003, and the conveyor, elevator and corn storage bins are controlled by a baghouse, identified as CE001. One corn storage bin, identified as corn storage bin 4, is uncontrolled. The maximum capacity of the grain receiving and handling operation is 420 tons of corn per hour. The scalper and hammermill have a maximum throughput capacity of 140 tons per hour.

Types and Quantities of Material Handled

CIE's grain receiving and handling operations process corn at a maximum throughput capacity of 420 tons per hour. CIE can process up to 20,000,000 bushels of corn per year.

Fugitive Dust Control Measures

CIE will monitor visible emissions from the exhaust of baghouses CE001 and CE003 on a daily basis and ensure the emissions are normal. CIE will operate the baghouses at all times while in operation and will perform preventive maintenance inspections on a monthly, quarterly and annual basis for each baghouse to ensure proper operation. CIE will monitor the pressure drop across each baghouse on a daily basis and will take reasonable response steps if a pressure drop reading is outside the normal range of 1.0 to 6.0 inches of water. CIE will require all trucks to cover their load at all times that the truck is in motion and will post and enforce a 25 mile per hour speed limit. All spilled corn will be manually swept up after each truck or railcar unloading. On windy days, CIE will close the bay doors on either side of the grain receiving building to reduce fugitive dust. While unloading corn from the trucks and railcars and during cleaning, all fans will be turned off in the corn storage bins to reduce excess fugitive emissions. CIE will ensure good housekeeping at all times.

Compliance Schedule

CIE will comply with the FDCP immediately.

Recordkeeping and Reporting Requirements

CIE will record the results of the daily visible emission notations and pressure drop readings for each baghouse, CE001 and CE003. If any abnormal conditions are noted, CIE will take the appropriate response steps and record all corrective actions taken to correct the problem. Facility personnel will be trained to identify abnormal fugitive dust emissions. If abnormal fugitive dust emissions are observed, additional corrective actions will be taken by facility personnel. Corrective measures may include stopping grain receiving operations until the source of the abnormal fugitive dust emissions is identified and corrected. CIE will also record the maintenance performed in accordance with preventive maintenance inspections conducted on the baghouses.

DDGS Cooling and Load-Out Operations

Description of Emission Unit

CIE operates a DDGS cooling and a DDGS load-out operation which consists of one (1) DDGS cooler with a maximum throughput rate of 34 tons per hour of DDGS and one (1) DDGS load-out operation with a maximum throughput rate of 101 tons per hour. The DDGS load-out operation consists of a DDGS dump pit, elevator, conveyor, and load spout. After being processed through two 45 MMBtu/hr natural gas-fired DDGS dryers, the DDGS is pneumatically blown through the DDGS cooler and any residual heat is released within the enclosed DDGS storage building. Vents along the sides of the building allow for air flow to cool the DDGS. After cooling, a pay loader loads the DDGS into a hopper that leads to the DDGS conveyor and elevator. The DDGS is then loaded into trucks or railcars. The fugitive dust emissions generated from the DDGS cooling are controlled by a baghouse, identified as CE014, and the DDGS load-out operation is controlled by a baghouse, identified as CE008.

Types and Quantities of Material Handled

The DDGS cooler has a maximum throughput rate of 34 tons per hour of DDGS and the DDGS load-out operation has a maximum throughput rate of 101 tons per hour of DDGS. CIE can produce up to 130,000 tons of DDGS per year.

Fugitive Dust Control Measures

CIE will monitor visible emissions from the exhaust of baghouses CE014 and CE008 on a daily basis and ensure the emissions are normal. CIE will operate the baghouses at all times while in operation and will perform preventive maintenance inspections on a monthly, quarterly and annual basis for each baghouse to ensure proper operation. CIE will monitor the pressure drop across each baghouse on a daily basis and will take reasonable response steps if a pressure drop reading is outside the normal range of 1.0 to 6.0 inches of water. CIE will ensure the doors on the DDGS storage building are

closed while the pay loader is in operation. The pay loader will be manually swept and cleaned on a daily basis and the doors, walls, and vents will be swept and cleaned on an as needed basis. Exterior walls and vent openings will be power washed semi-annually. CIE will reduce the DDGS loading arm drop height into the trucks and railcars and will require all trucks to cover their load prior to leaving the DDGS load-out operation building. CIE will post and enforce a 25 mile per hour speed limit. All DDGS spills will be cleaned up after each truck and railcar loading. On windy days, CIE will close the bay doors on either side of the DDGS load-out operation building to reduce fugitive dust. CIE will ensure good housekeeping at all times.

Compliance Schedule

CIE will comply with the FDCP immediately.

Recordkeeping and Reporting Requirements

CIE will record the results of the daily visible emission notations and pressure drop readings for each baghouse, CE014 and CE008. If any abnormal conditions are noted, CIE will take the appropriate response steps and record all corrective actions taken to correct the problem. Facility personnel will be trained to identify abnormal fugitive dust emissions. If abnormal fugitive dust emissions are observed, additional corrective actions will be taken by facility personnel. Corrective measures may include stopping DDGS shipping operations until the source of the abnormal fugitive emissions is identified and corrected. CIE will also record the maintenance performed in accordance with preventive maintenance inspections conducted on the baghouses.

Paved Roads and Parking Lots

Description of Emission Source

CIE has paved roads and parking lots consisting of asphalt and concrete located throughout the facility. The paved roads allow grain trucks, DDGS trucks, employee

vehicles, and other support vehicles to travel to the grain receiving and DDGS load-out building and parking areas.

Vehicular Activity

CIE primarily utilizes the paved roads for transfer of grain and DDGS to and from the grain receiving and DDGS load-out building. Table 1 summarizes the type of vehicles that utilize the paved roads and parking lots as well as an approximate number of each type of vehicle that travels the paved roads and parking lots per year.

TABLE 1
Vehicular Activity on Paved Roads and Parking Lots

Type of Vehicle	Number per Year
Corn Trucks	16,000
DDGS Trucks	7,000
Ethanol Trucks	3,000
CO2 Trucks	5,000
Chemical Delivery Trucks	500
Parcel and Freight Delivery Trucks	1,000
Contractor Trucks	100
Haul Trash Trucks	1,000
Waste Disposal Trucks	100
Corn Oil Trucks	100
Employee Vehicles (Administrative)	3,500
Employee Vehicles (Plant)	7,000
Company Vehicles	7,000
Off-Road Vehicles	7,000
Golf Cart	250
E-85 Tanker	500

Table 2 summarizes the type of equipment located on site to maintain the DDGS storage piles and wet distiller's grain (WDG) piles on-site. WDG is not typically manufactured but is included in the FDCP for completeness.

TABLE 2
Equipment Used to Maintain Storage Piles

Type of Equipment	Material Handled
John Deere 544J Pay Loader	DDGS
John Deere Tele Handler	WDG
John Deere Skid Steer	DDGS and WDG

Fugitive Dust Control Measures

CIE will post and enforce a speed limit of 25 miles per hour to reduce fugitive dust emissions. CIE will manually sweep up any spilled corn or DDGS on paved roads daily and as needed. CIE will require all trucks cover their load while in motion and will contract a wet road sweeper to clean paved roads as needed. Facility personnel will be trained to identify abnormal fugitive dust emissions. If abnormal fugitive dust emissions are observed, additional corrective actions will be taken by facility personnel. Corrective measures may include either sweeping the roads using a wet sweeper or the application of water.

Compliance Schedule

CIE will comply with the FDCP immediately.

Recordkeeping and Reporting Requirements

CIE will document awareness training of the speed limit for the facility.

Unpaved Roads and Parking Lots

Description of Emission Source

CIE has unpaved roads and parking lots located on the west side of the facility consisting of hard packed gravel. The unpaved roads and parking lots are used primarily for employee parking and parking access.

Vehicular Activity

CIE primarily utilizes the unpaved roads and parking lots for employee parking and parking access. Table 3 summarizes the type of vehicles that utilize the unpaved roads and parking lots as well as an approximate number of each type of vehicle to travel the unpaved roads and parking lots per year.

TABLE 3
Vehicular Activity on Unpaved Roads and Parking Lots

Type of Vehicle	Number per Year
Haul Trash Trucks	1,000
Waste Disposal Trucks	100
Employee Vehicles (Plant)	7,000
Company Vehicles	7,000
Off-Road Vehicles	7,000
Golf Cart	250

Fugitive Dust Control Measures

CIE will post and enforce a speed limit of 25 miles per hour to reduce fugitive dust emissions. Facility personnel will be trained to identify abnormal fugitive dust emissions. If abnormal fugitive dust emissions are observed, additional corrective actions will be taken by facility personnel. Corrective measures may include the application of water.

Compliance Schedule

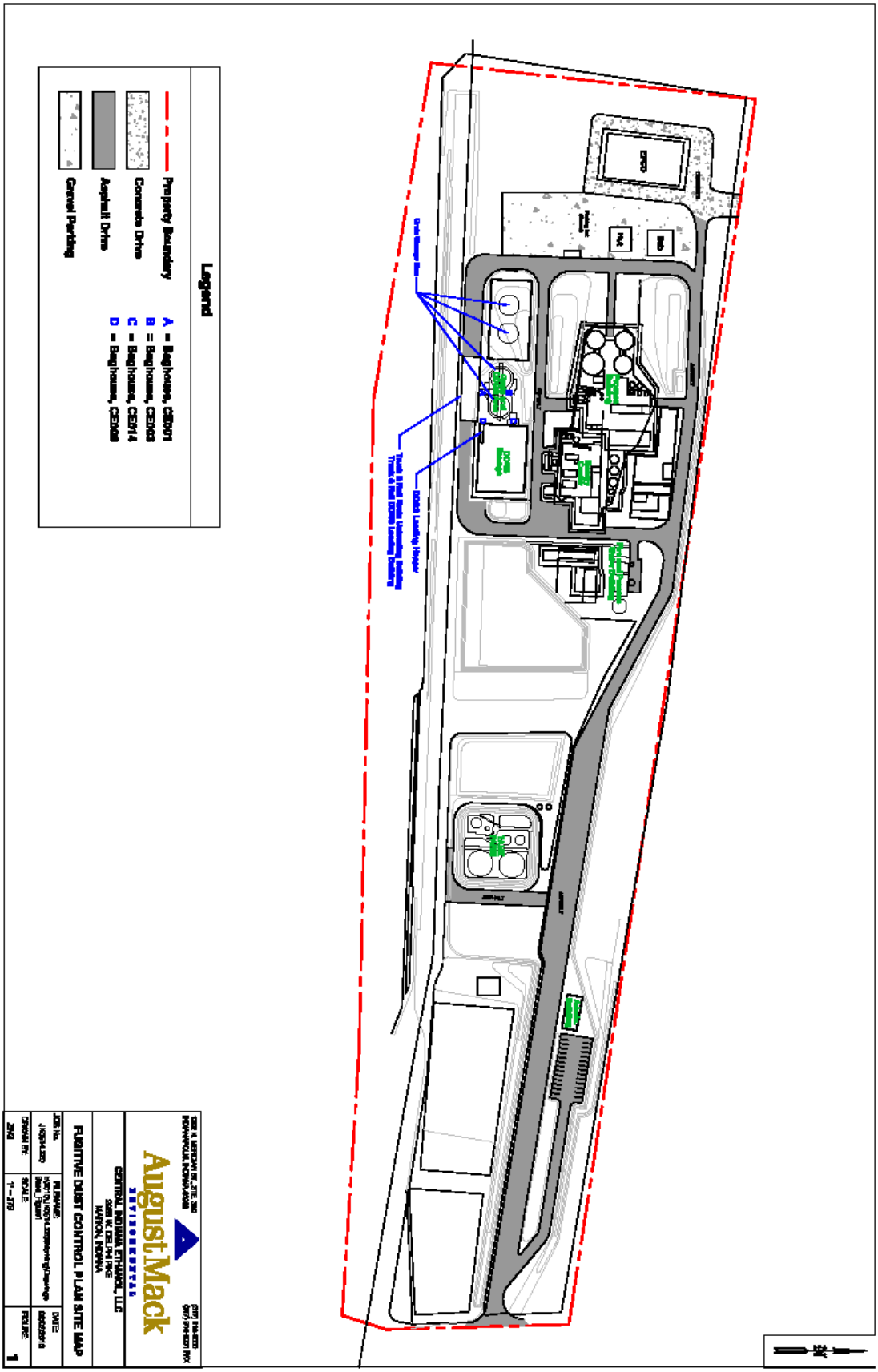
CIE will comply with the FDCP immediately.

Recordkeeping and Reporting Requirements

CIE will document awareness training of the speed limit for the facility.

Attachment 1

Fugitive Dust Control Plan Site Map


Legend
Property Boundary
A = Baghouse, CE001
B = Baghouse, CE003
C = Baghouse, CE014
D = Baghouse, CE008
Concrete Drive
Asphalt Drive
Gravel Parking
FUGITIVE DUST CONTROL PLAN SITE MAP
CENTRAL INDIANA ETHANOL, LLC
AugustMack
ENVIRONMENTAL

Indiana Department of Environmental Management
Office of Air Quality

Attachment B

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart Db—Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

Source: 72 FR 32742, June 13, 2007, unless otherwise noted.

§ 60.40b Applicability and delegation of authority.

(a) The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).

(b) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1984, but on or before June 19, 1986, is subject to the following standards:

(1) Coal-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 MMBtu/hr), inclusive, are subject to the particulate matter (PM) and nitrogen oxides (NO_X) standards under this subpart.

(2) Coal-fired affected facilities having a heat input capacity greater than 73 MW (250 MMBtu/hr) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; §60.40) are subject to the PM and NO_X standards under this subpart and to the sulfur dioxide (SO_2) standards under subpart D (§60.43).

(3) Oil-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 MMBtu/hr), inclusive, are subject to the NO_X standards under this subpart.

(4) Oil-fired affected facilities having a heat input capacity greater than 73 MW (250 MMBtu/hr) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; §60.40) are also subject to the NO_X standards under this subpart and the PM and SO_2standards under subpart D (§60.42 and §60.43).

(c) Affected facilities that also meet the applicability requirements under subpart J (Standards of performance for petroleum refineries; §60.104) are subject to the PM and NO_X standards under this subpart and the SO_2standards under subpart J (§60.104).

(d) Affected facilities that also meet the applicability requirements under subpart E (Standards of performance for incinerators; §60.50) are subject to the NO_X and PM standards under this subpart.

(e) Steam generating units meeting the applicability requirements under subpart Da (Standards of performance for electric utility steam generating units; §60.40Da) are not subject to this subpart.

(f) Any change to an existing steam generating unit for the sole purpose of combusting gases containing total reduced sulfur (TRS) as defined under §60.281 is not considered a modification under §60.14 and the steam generating unit is not subject to this subpart.

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

(1) Section 60.44b(f).

(2) Section 60.44b(g).

(3) Section 60.49b(a)(4).

(h) Any affected facility that meets the applicability requirements and is subject to subpart Ea, subpart Eb, or subpart AAAA of this part is not covered by this subpart.

(i) Heat recovery steam generators that are associated with combined cycle gas turbines and that 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 that are capable of combusting more than 29 MW (100 MMBtu/hr) heat input of fossil fuel. If the heat recovery steam generator is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(j) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1986 is not subject to subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators, §60.40).

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

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]

§ 60.41b 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 the fuels listed in §60.42b(a), §60.43b(a), or §60.44b(a), as applicable, during a calendar year and the potential heat input to the steam generating unit had it been operated for 8,760 hours during a calendar year at the maximum steady state 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 in a calendar year.

Byproduct/waste means any liquid or gaseous substance produced at chemical manufacturing plants, petroleum refineries, or pulp and paper mills (except natural gas, distillate oil, or residual oil) and combusted in a steam generating unit for heat recovery or for disposal. Gaseous substances with carbon dioxide (CO_2) levels greater than 50 percent or carbon monoxide levels greater than 10 percent are not byproduct/waste for the purpose of this subpart.

Chemical manufacturing plants mean industrial plants that are classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 28.

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, including but not limited to solvent refined coal, gasified coal not meeting the definition of natural gas, coal-oil mixtures, coke oven gas, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any byproduct 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 kJ/kg (6,000 Btu/lb) on a dry basis.

Cogeneration , also known as combined heat and power, means a facility that simultaneously produces both electric (or mechanical) and useful thermal energy from the same primary energy source.

Coke oven gas means the volatile constituents generated in the gaseous exhaust during the carbonization of bituminous coal to form coke.

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

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

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 §60.17) 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 §60.17).

Dry flue gas desulfurization technology means a SO_2control system that is located downstream of the steam generating unit and 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 slurries or solutions used in dry flue gas desulfurization technology include but are not limited to lime and sodium.

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_2control system that is not defined as a conventional technology under this section, and for which the owner or operator of the facility has applied to the Administrator and received approval to operate as an emerging technology under §60.49b(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 combustion of fuel in a bed or series of beds (including but not limited to bubbling bed units and circulating bed units) of limestone aggregate (or other sorbent materials) in which these materials are forced upward by the flow of combustion air and the gaseous products of combustion.

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.

Full capacity means operation of the steam generating unit at 90 percent or more of the maximum steady-state design heat input capacity.

Gaseous fuel means any fuel that is a gas at ISO conditions. This includes, but is not limited to, natural gas and gasified coal (including coke oven gas).

Gross output means the gross useful work performed by the steam generated. For units generating only electricity, the gross useful work performed is the gross electrical output from the turbine/generator set. For cogeneration units, the gross useful work performed is the gross electrical or mechanical output plus 75

percent of the useful thermal output measured relative to ISO conditions that is not used to generate additional electrical or mechanical output or to enhance the performance of the unit (*i.e.* , steam delivered to an industrial process).

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 gas turbines, internal combustion engines, kilns, etc.

Heat release rate means the steam generating unit design heat input capacity (in MW or Btu/hr) divided by the furnace volume (in cubic meters or cubic feet); the furnace volume is that volume bounded by the front furnace wall where the burner is located, the furnace side waterwall, and extending to the level just below or in front of the first row of convection pass tubes.

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

High heat release rate means a heat release rate greater than 730,000 J/sec-m^3 (70,000 Btu/hr-ft^3).

ISO Conditions means a temperature of 288 Kelvin, a relative humidity of 60 percent, and a pressure of 101.3 kilopascals.

Lignite means a type of coal classified as lignite A or lignite B by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17).

Low heat release rate means a heat release rate of 730,000 J/sec-m^3 (70,000 Btu/hr-ft^3) or less.

Mass-feed stoker steam generating unit means a steam generating unit where solid fuel is introduced directly into a retort or is fed directly onto a grate where it is combusted.

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

Municipal-type solid waste means refuse, more than 50 percent of which is waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials, and noncombustible materials such as glass and rock.

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 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 and residual oil.

Petroleum refinery means industrial plants as classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 29.

Potential sulfur dioxide emission rate means the theoretical SO_2emissions (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. For gasified coal or oil that is desulfurized prior to combustion, the *Potential sulfur dioxide emission rate* is the theoretical SO_2emissions (ng/J or lb/MMBtu heat input) that would result from combusting fuel in a cleaned state without using any post combustion 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.

Pulp and paper mills means industrial plants that are classified by the Department of Commerce under North American Industry Classification System (NAICS) Code 322 or Standard Industrial Classification (SIC) Code 26.

Pulverized coal-fired steam generating unit means a steam generating unit in which pulverized coal is introduced into an air stream that carries the coal to the combustion chamber of the steam generating unit where it is fired in suspension. This includes both conventional pulverized coal-fired and micropulverized coal-fired steam generating units. Residual oil means crude oil, fuel oil numbers 1 and 2 that have a nitrogen content greater than 0.05 weight percent, and all fuel oil numbers 4, 5 and 6, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Spreader stoker steam generating unit means a steam generating unit in which solid fuel is introduced to the combustion zone by a mechanism that throws the fuel onto a grate from above. Combustion takes place both in suspension and on the grate.

Steam generating unit means a device that combusts any fuel or byproduct/waste and produces steam or heats water or heats any heat transfer medium. This term includes any municipal-type solid waste incinerator with a heat recovery steam generating unit or any steam generating unit that combusts fuel and is part of a cogeneration system or a combined cycle system. This term does not include process heaters as they are 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.

Very low sulfur oil means for units constructed, reconstructed, or modified on or before February 28, 2005, oil that contains no more than 0.5 weight percent sulfur or that, when combusted without SO_2emission control, has a SO_2emission rate equal to or less than 215 ng/J (0.5 lb/MMBtu) heat input. For units constructed, reconstructed, or modified after February 28, 2005 and not located in a noncontinental area, *very low sulfur oil* means oil that contains no more than 0.30 weight percent sulfur or that, when combusted without SO_2emission control, has a SO_2 emission rate equal to or less than 140 ng/J (0.32 lb/MMBtu) heat input. For units constructed, reconstructed, or modified after February 28, 2005 and located in a noncontinental area, *very low sulfur oil* means oil that contains no more than 0.5 weight percent sulfur or that, when combusted without SO_2 emission control, has a SO_2 emission rate equal to or less than 215 ng/J (0.50 lb/MMBtu) heat input.

Wet flue gas desulfurization technology means a SO_2 control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gas with an alkaline slurry or solution and forming a liquid material. This definition applies to devices where the aqueous liquid material product of this contact is subsequently converted to other forms. Alkaline reagents used in wet flue gas desulfurization technology include, but are not limited to, lime, limestone, and sodium.

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 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]

§ 60.42b Standard for sulfur dioxide (SO2).

(a) Except as provided in paragraphs (b), (c), (d), or (j) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever 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 oil shall cause to be discharged into the atmosphere any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) or 10 percent (0.10) of the potential SO_2 emission rate (90 percent reduction) and the emission limit determined according to the following formula:

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

Where:

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

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

K_b = 340 ng/J (or 0.80 lb/MMBtu);

H_a = Heat input from the combustion of coal, in J (MMBtu); and

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

For 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 in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(b) On and after the date on which the 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 refuse alone in a fluidized bed combustion steam generating unit shall cause to be discharged into the atmosphere any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) or 20 percent (0.20) of the potential SO_2 emission rate (80 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input. If coal or oil is fired with coal refuse, the affected facility is subject to paragraph (a) or (d) of this section, as applicable. For 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 in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(c) On and after the date on which the performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that combusts coal or oil, either alone or in combination with any other fuel, and that uses an emerging technology for the control of SO_2 emissions, shall cause to be discharged into the atmosphere any gases that contain SO_2 in excess of 50 percent of the potential SO_2 emission rate (50 percent reduction) and that contain SO_2 in excess of the emission limit determined according to the following formula:

$$E_s = \frac{(K_c H_c + K_d H_d)}{(H_c + H_d)}$$

Where:

E_s= SO2 emission limit, in ng/J or lb/MM Btu heat input;

K_c= 260 ng/J (or 0.60 lb/MMBtu);

K_d= 170 ng/J (or 0.40 lb/MMBtu);

H_c= Heat input from the combustion of coal, in J (MMBtu); and

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

For 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 in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels, or from the heat input derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(d) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005 and listed in paragraphs (d)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere any gases that contain SO_2in excess of 520 ng/J (1.2 lb/MMBtu) heat input if the affected facility combusts coal, or 215 ng/J (0.5 lb/MMBtu) heat input if the affected facility combusts oil other than very low sulfur oil. Percent reduction requirements are not applicable to affected facilities under paragraphs (d)(1), (2), (3) or (4) of this section. For facilities complying with paragraphs (d)(1), (2), or (3) of this section, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(1) Affected facilities that have an annual capacity factor for coal and oil of 30 percent (0.30) or less and are subject to a federally enforceable permit limiting the operation of the affected facility to an annual capacity factor for coal and oil of 30 percent (0.30) or less;

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

(3) Affected facilities combusting coal or oil, alone or in combination with any fuel, 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 and oil in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from the exhaust gases entering the duct burner; or

(4) The affected facility burns coke oven gas alone or in combination with natural gas or very low sulfur distillate oil.

(e) Except as provided in paragraph (f) of this section, compliance with the emission limits, fuel oil sulfur limits, and/or percent reduction requirements under this section are determined on a 30-day rolling average basis.

(f) Except as provided in paragraph (j)(2) of this section, compliance with the emission limits or fuel oil sulfur limits under this section is determined on a 24-hour average basis for affected facilities that (1) have a federally enforceable permit limiting the annual capacity factor for oil to 10 percent or less, (2) combust only very low sulfur oil, and (3) do not combust any other fuel.

(g) Except as provided in paragraph (i) of this section and §60.45b(a), the SO_2emission limits and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(h) Reductions in the potential SO_2emission rate through fuel pretreatment are not credited toward the percent reduction requirement under paragraph (c) of this section unless:

(1) Fuel pretreatment results in a 50 percent or greater reduction in potential SO_2emissions and

(2) Emissions from the pretreated fuel (without combustion or post-combustion SO_2control) are equal to or less than the emission limits specified in paragraph (c) of this section.

(i) An affected facility subject to paragraph (a), (b), or (c) of this section may combust very low sulfur oil or natural gas when the SO_2control system is not being operated because of malfunction or maintenance of the SO_2control system.

(j) Percent reduction requirements are not applicable to affected facilities combusting only very low sulfur oil. The owner or operator of an affected facility combusting very low sulfur oil shall demonstrate that the oil meets the definition of very low sulfur oil by: (1) Following the performance testing procedures as described in §60.45b(c) or §60.45b(d), and following the monitoring procedures as described in §60.47b(a) or §60.47b(b) to determine SO_2emission rate or fuel oil sulfur content; or (2) maintaining fuel records as described in §60.49b(r).

(k)(1) Except as provided in paragraphs (k)(2), (k)(3), and (k)(4) of this section, 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, natural gas, a mixture of these fuels, or a mixture of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that contain SO_2in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 8 percent (0.08) of the potential SO_2emission rate (92 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input. For facilities complying with the percent reduction standard and paragraph (k)(3) of this section, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in paragraph (k) of this section. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(2) Units firing only very low sulfur oil, gaseous fuel, a mixture of these fuels, or a mixture of these fuels with any other fuels with a potential SO_2emission rate of 140 ng/J (0.32 lb/MMBtu) heat input or less are exempt from the SO_2emissions limit in paragraph (k)(1) of this section.

(3) Units that are located in a noncontinental area and that combust coal, oil, or natural gas shall not discharge any gases that contain SO_2in excess of 520 ng/J (1.2 lb/MMBtu) heat input if the affected facility combusts coal, or 215 ng/J (0.50 lb/MMBtu) heat input if the affected facility combusts oil or natural gas.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]

§ 60.43b Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever 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, 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, (i) If the affected facility combusts only coal, or

(ii) If the affected facility combusts coal and 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 and other fuels and 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.

(3) 86 ng/J (0.20 lb/MMBtu) heat input if the affected facility combusts coal or coal and other fuels and

(i) Has an annual capacity factor for coal or coal and other fuels of 30 percent (0.30) or less,

(ii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less,

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for coal or coal and other solid fuels, and

(iv) Construction of the affected facility commenced after June 19, 1984, and before November 25, 1986.

(4) An affected facility burning coke oven gas alone or in combination with other fuels not subject to a PM standard under §60.43b and not using a post-combustion technology (except a wet scrubber) for reducing PM or SO_2emissions is not subject to the PM limits under §60.43b(a).

(b) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, and that combusts oil (or mixtures of oil with other fuels) and uses a conventional or emerging technology to reduce SO_2emissions 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.

(c) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, and that combusts wood, or wood with other fuels, except coal, shall cause to be discharged from that affected facility any gases that contain PM in excess of the following emission limits:

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

(2) 86 ng/J (0.20 lb/MMBtu) heat input if (i) The affected facility has an annual capacity factor of 30 percent (0.30) or less for wood;

(ii) Is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for wood; and

(iii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less.

(d) 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 combusts municipal-type solid waste or mixtures of municipal-type solid waste with other fuels, 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) 43 ng/J (0.10 lb/MMBtu) heat input;

(i) If the affected facility combusts only municipal-type solid waste; or

(ii) If the affected facility combusts municipal-type solid waste and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 86 ng/J (0.20 lb/MMBtu) heat input if the affected facility combusts municipal-type solid waste or municipal-type solid waste and other fuels; and

(i) Has an annual capacity factor for municipal-type solid waste and other fuels of 30 percent (0.30) or less;

(ii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less;

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for municipal-type solid waste, or municipal-type solid waste and other fuels; and

(iv) Construction of the affected facility commenced after June 19, 1984, but on or before November 25, 1986.

(e) For the purposes of this section, the annual capacity factor is determined by dividing the actual heat input to the steam generating unit during the calendar year from the combustion of coal, wood, or municipal-type solid waste, and other fuels, as applicable, by the potential heat input to the steam generating unit if the steam generating unit had been operated for 8,760 hours at the maximum heat input capacity.

(f) 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 can combust coal, oil, wood, or mixtures of these fuels with any other fuels shall cause to be discharged into the atmosphere 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.

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

(h)(1) Except as provided in paragraphs (h)(2), (h)(3), (h)(4), (h)(5), and (h)(6) of this section, 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 commenced 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 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,

(2) As an alternative to meeting the requirements of paragraph (h)(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, 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 maximum heat input capacity of 73 MW (250 MMBtu/h) or less 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) 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 maximum heat input capacity greater than 73 MW (250 MMBtu/h) shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 37 ng/J (0.085 lb/MMBtu) heat input.

(5) 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, an owner or operator of an affected facility not located in a noncontinental area that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.30 weight percent sulfur, coke oven gas, a mixture of these fuels, or either fuel (or a mixture of these fuels) in combination with other fuels not subject to a PM standard in §60.43b and not using a post-combustion technology (except a wet scrubber) to reduce SO_2or PM emissions is not subject to the PM limits in (h)(1) of this section.

(6) 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, an owner or operator of an affected facility located in a noncontinental area that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.5 weight percent sulfur, coke oven gas, a mixture of these fuels, or either fuel (or a mixture of these fuels) in combination with other fuels not subject to a PM standard in §60.43b and not using a post-combustion technology (except a wet scrubber) to reduce SO_2or PM emissions is not subject to the PM limits in (h)(1) of this section.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]

§ 60.44b Standard for nitrogen oxides (NOX).

(a) Except as provided under paragraphs (k) and (l) of this section, 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 is subject to the provisions of this section and that combusts only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_X (expressed as NO_2) in excess of the following emission limits:

Fuel/steam generating unit type	Nitrogen oxide emission limits (expressed as NO_2) heat input	
	ng/J	lb/MMBTu
(1) Natural gas and distillate oil, except (4):		
(i) Low heat release rate	43	0.10
(ii) High heat release rate	86	0.20
(2) Residual oil:		
(i) Low heat release rate	130	0.30
(ii) High heat release rate	170	0.40
(3) Coal:		
(i) Mass-feed stoker	210	0.50
(ii) Spreader stoker and fluidized bed combustion	260	0.60
(iii) Pulverized coal	300	0.70

Fuel/steam generating unit type	Nitrogen oxide emission limits (expressed as NO_2) heat input	
	ng/J	lb/MMBTu
(iv) Lignite, except (v)	260	0.60
(v) Lignite mined in North Dakota, South Dakota, or Montana and combusted in a slag tap furnace	340	0.80
(vi) Coal-derived synthetic fuels	210	0.50
(4) Duct burner used in a combined cycle system:		
(i) Natural gas and distillate oil	86	0.20
(ii) Residual oil	170	0.40

(b) Except as provided under paragraphs (k) and (l) of this section, 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 simultaneously combusts mixtures of coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_X in excess of a limit determined by the use of the following formula:

$$E_n = \frac{(EL_{go}H_{go}) + (EL_{ro}H_{ro}) + (EL_cH_c)}{(H_{go} + H_{ro} + H_c)}$$

Where:

E_n= NO_X emission limit (expressed as NO_2), ng/J (lb/MMBtu);

EL_{go}= Appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/MMBtu);

H_{go}= Heat input from combustion of natural gas or distillate oil, J (MMBtu);

EL_{ro}= Appropriate emission limit from paragraph (a)(2) for combustion of residual oil, ng/J (lb/MMBtu);

H_{ro}= Heat input from combustion of residual oil, J (MMBtu);

EL_c= Appropriate emission limit from paragraph (a)(3) for combustion of coal, ng/J (lb/MMBtu); and

H_c= Heat input from combustion of coal, J (MMBtu).

(c) Except as provided under paragraph (l) of this section, 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 simultaneously combusts coal or oil, or a mixture of these fuels with natural gas, and wood, municipal-type solid waste, or any other fuel shall cause to be discharged into the atmosphere any gases that contain NO_X in excess of the emission limit for the coal or oil, or mixtures of these fuels with natural gas combusted in the affected facility, as determined pursuant to paragraph (a) or (b) of this section, unless the affected facility has an annual capacity factor for coal or oil, or mixture of these fuels with natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, or a mixture of these fuels with natural gas.

(d) 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 simultaneously combusts natural gas with wood, municipal-type solid waste, or other solid fuel, except coal, shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_X in excess of 130 ng/J (0.30 lb/MMBtu) heat input unless the affected facility has an annual capacity factor for natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for natural gas.

(e) Except as provided under paragraph (l) of this section, 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 simultaneously combusts coal, oil, or natural gas with byproduct/waste shall cause to be discharged into the atmosphere any gases that contain NO_X in excess of the emission limit determined by the following formula unless the affected facility has an annual capacity factor for coal, oil, and natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less:

$$E_n = \frac{(EL_{go}H_{go}) + (EL_{ro}H_{ro}) + (EL_cH_c)}{(H_{go} + H_{ro} + H_c)}$$

Where:

E_n= NO_X emission limit (expressed as NO_2), ng/J (lb/MMBtu);

EL_{go}= Appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/MMBtu);

H_{go}= Heat input from combustion of natural gas, distillate oil and gaseous byproduct/waste, J (MMBtu);

EL_{ro}= Appropriate emission limit from paragraph (a)(2) for combustion of residual oil and/or byproduct/waste, ng/J (lb/MMBtu);

H_{ro}= Heat input from combustion of residual oil, J (MMBtu);

EL_c= Appropriate emission limit from paragraph (a)(3) for combustion of coal, ng/J (lb/MMBtu); and

H_c= Heat input from combustion of coal, J (MMBtu).

(f) Any owner or operator of an affected facility that combusts byproduct/waste with either natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility to establish a NO_X emission limit that shall apply specifically to that affected facility when the byproduct/waste is combusted. The petition shall include sufficient and appropriate data, as determined by the Administrator, such as NO_X emissions from the affected facility, waste composition (including nitrogen content), and combustion conditions to allow the Administrator to confirm that the affected facility is unable to comply with the emission limits in paragraph (e) of this section and to determine the appropriate emission limit for the affected facility.

(1) Any owner or operator of an affected facility petitioning for a facility-specific NO_X emission limit under this section shall:

(i) Demonstrate compliance with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, by conducting a 30-

day performance test as provided in §60.46b(e). During the performance test only natural gas, distillate oil, or residual oil shall be combusted in the affected facility; and

(ii) Demonstrate that the affected facility is unable to comply with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, when gaseous or liquid byproduct/waste is combusted in the affected facility under the same conditions and using the same technological system of emission reduction applied when demonstrating compliance under paragraph (f)(1)(i) of this section.

(2) The NO_X emission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, shall be applicable to the affected facility until and unless the petition is approved by the Administrator. If the petition is approved by the Administrator, a facility-specific NO_X emission limit will be established at the NO_X emission level achievable when the affected facility is combusting oil or natural gas and byproduct/waste in a manner that the Administrator determines to be consistent with minimizing NO_X emissions. In lieu of amending this subpart, a letter will be sent to the facility describing the facility-specific NO_X limit. The facility shall use the compliance procedures detailed in the letter and make the letter available to the public. If the Administrator determines it is appropriate, the conditions and requirements of the letter can be reviewed and changed at any point.

(g) Any owner or operator of an affected facility that combusts hazardous waste (as defined by 40 CFR part 261 or 40 CFR part 761) with natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility for a waiver from compliance with the NO_X emission limit that applies specifically to that affected facility. The petition must include sufficient and appropriate data, as determined by the Administrator, on NO_X emissions from the affected facility, waste destruction efficiencies, waste composition (including nitrogen content), the quantity of specific wastes to be combusted and combustion conditions to allow the Administrator to determine if the affected facility is able to comply with the NO_X emission limits required by this section. The owner or operator of the affected facility shall demonstrate that when hazardous waste is combusted in the affected facility, thermal destruction efficiency requirements for hazardous waste specified in an applicable federally enforceable requirement preclude compliance with the NO_X emission limits of this section. The NO_X emission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, are applicable to the affected facility until and unless the petition is approved by the Administrator. (See 40 CFR 761.70 for regulations applicable to the incineration of materials containing polychlorinated biphenyls (PCB's).) In lieu of amending this subpart, a letter will be sent to the facility describing the facility-specific NO_X limit. The facility shall use the compliance procedures detailed in the letter and make the letter available to the public. If the Administrator determines it is appropriate, the conditions and requirements of the letter can be reviewed and changed at any point.

(h) For purposes of paragraph (i) of this section, the NO_X standards under this section apply at all times including periods of startup, shutdown, or malfunction.

(i) Except as provided under paragraph (j) of this section, compliance with the emission limits under this section is determined on a 30-day rolling average basis.

(j) Compliance with the emission limits under this section is determined on a 24-hour average basis for the initial performance test and on a 3-hour average basis for subsequent performance tests for any affected facilities that:

(1) Combust, alone or in combination, only natural gas, distillate oil, or residual oil with a nitrogen content of 0.30 weight percent or less;

(2) Have a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less; and

(3) Are subject to a federally enforceable requirement limiting operation of the affected facility to the firing of natural gas, distillate oil, and/or residual oil with a nitrogen content of 0.30 weight percent or less and limiting operation of the affected facility to a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less.

(k) Affected facilities that meet the criteria described in paragraphs (j)(1), (2), and (3) of this section, and that have a heat input capacity of 73 MW (250 MMBtu/hr) or less, are not subject to the NO_X emission limits under this section.

(l) 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 commenced construction or reconstruction after July 9, 1997 shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_X (expressed as NO_2) in excess of the following limits:

(1) If the affected facility combusts coal, oil, natural gas, a mixture of these fuels, or a mixture of these fuels with any other fuels: A limit of 86 ng/J (0.20 lb/MMBtu) heat input unless the affected facility has an annual capacity factor for coal, oil, and natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, and natural gas; or

(2) If the affected facility has a low heat release rate and combusts natural gas or distillate oil in excess of 30 percent of the heat input on a 30-day rolling average from the combustion of all fuels, a limit determined by use of the following formula:

$$E_n = \frac{(0.10 \times H_{go}) + (0.20 \times H_r)}{(H_{go} + H_r)}$$

Where:

E_n= NO_X emission limit, (lb/MMBtu);

H_{go}= 30-day heat input from combustion of natural gas or distillate oil; and

H_r= 30-day heat input from combustion of any other fuel.

(3) After February 27, 2006, units where more than 10 percent of total annual output is electrical or mechanical may comply with an optional limit of 270 ng/J (2.1 lb/MWh) gross energy output, based on a 30-day rolling average. Units complying with this output-based limit must demonstrate compliance according to the procedures of §60.48Da(i) of subpart Da of this part, and must monitor emissions according to §60.49Da(c), (k), through (n) of subpart Da of this part.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009]

§ 60.45b Compliance and performance test methods and procedures for sulfur dioxide.

(a) The SO_2emission standards in §60.42b apply at all times. Facilities burning coke oven gas alone or in combination with any other gaseous fuels or distillate oil are allowed to exceed the limit 30 operating days per calendar year for SO_2control system maintenance.

(b) In conducting the performance tests required under §60.8, the owner or operator shall use the methods and procedures in appendix A (including fuel certification and sampling) of this part or the methods and procedures as specified in this section, except as provided in §60.8(b). 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.

(c) The owner or operator of an affected facility shall conduct performance tests to determine compliance with the percent of potential SO_2emission rate (% P_s) and the SO_2emission rate (E_s) pursuant to §60.42b following the procedures listed below, except as provided under paragraph (d) and (k) of this section.

(1) The initial performance test shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the SO_2standards 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 affected facility will be operated, but not later than 180 days after initial startup of the facility.

(2) If only coal, only oil, or a mixture of coal and oil is combusted, the following procedures are used:

(i) The procedures in Method 19 of appendix A–7 of this part are used to determine the hourly SO_2emission rate (E_{ho}) and the 30-day average emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the CEMS of §60.47b(a) or (b).

(ii) The percent of potential SO_2emission rate ($\%P_s$) emitted to the atmosphere 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_2emission rate, percent;

$\%R_g$= SO_2removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

$\%R_f$= SO_2removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

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

(i) An adjusted hourly SO_2emission rate (E_{ho}^{o}) is used in Equation 19–19 of Method 19 of appendix A of this part to compute an adjusted 30-day average emission rate (E_{ao}^{o}). The Eho° is computed using the following formula:

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

Where:

E_{ho}^{o} = Adjusted hourly SO_2emission rate, ng/J (lb/MMBtu);

E_{ho}= Hourly SO_2emission rate, ng/J (lb/MMBtu);

E_w= SO_2concentration in fuels other than coal and oil combusted in the affected facility, as determined by the 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; and

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

(ii) To compute the percent of potential SO_2emission rate ($\%P_s$), an adjusted $\%R_g$($\%R_g^o$) is computed from the adjusted E_{ao}^o from paragraph (b)(3)(i) of this section and an adjusted average SO_2inlet rate (E_{ai}^o) using the following formula:

$$\%R_g^o = 100\left(1.0 - \frac{E_{ao}^o}{E_{ai}^o}\right)$$

To compute E_{ai}^o , an adjusted hourly SO_2inlet 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 hourly SO_2inlet rate, ng/J (lb/MMBtu); and

E_{hi}= Hourly SO_2inlet rate, ng/J (lb/MMBtu).

(4) The owner or operator of an affected facility subject to paragraph (c)(3) of this section does not have to measure parameters E_w or X_k if the owner or operator elects to assume that X_k= 1.0. Owners or operators of affected facilities who assume X_k = 1.0 shall:

(i) Determine $\%P_s$ following the procedures in paragraph (c)(2) of this section; and

(ii) Sulfur dioxide emissions (E_s) are considered to be in compliance with SO_2emission limits under §60.42b.

(5) The owner or operator of an affected facility that qualifies under the provisions of §60.42b(d) does not have to measure parameters E_w or X_k in paragraph (c)(3) of this section if the owner or operator of the affected facility elects to measure SO_2emission rates of the coal or oil following the fuel sampling and analysis procedures in Method 19 of appendix A–7 of this part.

(d) Except as provided in paragraph (j) of this section, the owner or operator of an affected facility that combusts only very low sulfur oil, natural gas, or a mixture of these fuels, has an annual capacity factor for oil of 10 percent (0.10) or less, and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for oil of 10 percent (0.10) or less shall:

(1) Conduct the initial performance test over 24 consecutive steam generating unit operating hours at full load;

(2) Determine compliance with the standards after the initial performance test based on the arithmetic average of the hourly emissions data during each steam generating unit operating day if a CEMS is used, or based on a daily average if Method 6B of appendix A of this part or fuel sampling and analysis procedures under Method 19 of appendix A of this part are used.

(e) The owner or operator of an affected facility subject to §60.42b(d)(1) shall demonstrate the maximum design capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. This demonstration will be made during the initial performance test and a subsequent demonstration may be requested at any other time. If the 24-hour average firing rate for the affected facility is less than the maximum design capacity provided by the manufacturer of the affected facility, the 24-hour average firing rate shall be used to determine the capacity utilization rate for the affected facility, otherwise the maximum design capacity provided by the manufacturer is used.

(f) For the initial performance test required under §60.8, compliance with the SO_2emission limits and percent reduction requirements under §60.42b is based on the average emission rates and the average percent reduction for $SO_2$for the first 30 consecutive steam generating unit operating days, except as provided under paragraph (d) of this section. The initial performance test is the only test for which at least 30 days prior notice is required unless otherwise specified by the Administrator. The initial performance test is to be scheduled so that the first steam generating unit operating day of the 30 successive steam generating unit operating days is completed within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility. The boiler load during the 30-day period does not have to be the maximum design load, but must be representative of future operating conditions and include at least one 24-hour period at full load.

(g) After the initial performance test required under §60.8, compliance with the SO_2emission limits and percent reduction requirements under §60.42b is based on the average emission rates and the average percent reduction for $SO_2$for 30 successive steam generating unit operating days, except as provided under paragraph (d). A separate performance test is completed at the end of each steam generating unit operating day after the initial performance test, and a new 30-day average emission rate and percent reduction for $SO_2$are calculated to show compliance with the standard.

(h) Except as provided under paragraph (i) of this section, the owner or operator of an affected facility shall use all valid SO_2emissions data in calculating $\%P_s$ and E_{ho} under paragraph (c), of this section whether or not the minimum emissions data requirements under §60.46b are achieved. All valid emissions data, including valid SO_2emission data collected during periods of startup, shutdown and malfunction, shall be used in calculating $\%P_s$ and E_{ho} pursuant to paragraph (c) of this section.

(i) During periods of malfunction or maintenance of the SO_2control systems when oil is combusted as provided under §60.42b(i), emission data are not used to calculate $\%P_s$ or E_s under §60.42b(a), (b) or (c), however, the emissions data are used to determine compliance with the emission limit under §60.42b(i).

(j) The owner or operator of an affected facility that only combusts very low sulfur oil, natural gas, or a mixture of these fuels with any other fuels not subject to an SO_2standard is not subject to the compliance and performance testing requirements of this section if the owner or operator obtains fuel receipts as described in §60.49b(r).

(k) The owner or operator of an affected facility seeking to demonstrate compliance in §§60.42b(d)(4), 60.42b(j), 60.42b(k)(2), and 60.42b(k)(3) (when not burning coal) shall follow the applicable procedures in §60.49b(r).

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009]

§ 60.46b Compliance and performance test methods and procedures for particulate matter and nitrogen oxides.

(a) The PM emission standards and opacity limits under §60.43b apply at all times except during periods of startup, shutdown, or malfunction. The NO_X emission standards under §60.44b apply at all times.

(b) Compliance with the PM emission standards under §60.43b shall be determined through performance testing as described in paragraph (d) of this section, except as provided in paragraph (i) of this section.

(c) Compliance with the NO_X emission standards under §60.44b shall be determined through performance testing under paragraph (e) or (f), or under paragraphs (g) and (h) of this section, as applicable.

(d) To determine compliance with the PM emission limits and opacity limits under §60.43b, the owner or operator of an affected facility shall conduct an initial performance test as required under §60.8, and shall conduct subsequent performance tests as requested by the Administrator, using the following procedures and reference methods:

(1) Method 3A or 3B of appendix A–2 of this part is used for gas analysis when applying Method 5 of appendix A–3 of this part or Method 17 of appendix A–6 of this part.

(2) 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 shall be used at affected facilities without wet flue gas desulfurization (FGD) systems; and

(ii) Method 17 of appendix A–6 of this part may be used at 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–3 of this part may be used in Method 17 of appendix A–6 of this part only if it is used after a wet FGD system. Do not use Method 17 of appendix A–6 of this part after wet FGD systems if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part is to be used only after wet FGD systems.

(3) Method 1 of appendix A of this part is used to select the sampling site and the number of traverse sampling points. The sampling time for each run is at least 120 minutes and the minimum sampling volume is 1.7 dscm (60 dscf) except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

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

(5) For determination of PM emissions, the oxygen (O_2) or CO_2sample is 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.

(6) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rate expressed in ng/J heat input is determined using:

(i) The O_2or CO_2measurements 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.

(7) Method 9 of appendix A of this part is used for determining the opacity of stack emissions.

(e) To determine compliance with the emission limits for NO_X required under §60.44b, the owner or operator of an affected facility shall conduct the performance test as required under §60.8 using the continuous system for monitoring NO_X under §60.48(b).

(1) For the initial compliance test, NO_X from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NO_X emission standards under §60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

(2) Following the date on which the initial performance test is completed or is required to be completed in §60.8, whichever date comes first, the owner or operator of an affected facility which combusts coal (except as specified under §60.46b(e)(4)) or which combusts residual oil having a nitrogen content greater than 0.30 weight percent shall determine compliance with the NO_X emission standards in §60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated for each steam generating unit operating day as the average of all of the hourly NO_X emission data for the preceding 30 steam generating unit operating days.

(3) Following the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that has a heat input capacity greater than 73 MW (250 MMBtu/hr) and that combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall determine compliance with the NO_X standards under §60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_X emission data for the preceding 30 steam generating unit operating days.

(4) Following the date on which the initial 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 has a heat input capacity of 73 MW (250 MMBtu/hr) or less and that combusts natural gas, distillate oil, gasified coal, or residual oil having a nitrogen content of 0.30 weight percent or less shall upon request determine compliance with the NO_X standards in §60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, NO_X emissions data collected pursuant to §60.48b(g)(1) or §60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the NO_X emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_X emission data for the preceding 30 steam generating unit operating days.

(5) If the owner or operator of an affected facility that combusts residual oil does not sample and analyze the residual oil for nitrogen content, as specified in §60.49b(e), the requirements of §60.48b(g)(1) apply and the provisions of §60.48b(g)(2) are inapplicable.

(f) To determine compliance with the emissions limits for NO_X required by §60.44b(a)(4) or §60.44b(l) for duct burners used in combined cycle systems, either of the procedures described in paragraph (f)(1) or (2) of this section may be used:

(1) The owner or operator of an affected facility shall conduct the performance test required under §60.8 as follows:

(i) The emissions rate (E) of NO_X shall be computed using Equation 1 in this section:

$$E = E_{sg} + \left(\frac{H_g}{H_b}\right)\left(E_{sg} - E_g\right) \qquad \text{(Eq.1)}$$

Where:

E = Emissions rate of NO_X from the duct burner, ng/J (lb/MMBtu) heat input;

E_{sg}= Combined effluent emissions rate, in ng/J (lb/MMBtu) heat input using appropriate F factor as described in Method 19 of appendix A of this part;

H_g= Heat input rate to the combustion turbine, in J/hr (MMBtu/hr);

H_b= Heat input rate to the duct burner, in J/hr (MMBtu/hr); and

E_g= Emissions rate from the combustion turbine, in ng/J (lb/MMBtu) heat input calculated using appropriate F factor as described in Method 19 of appendix A of this part.

(ii) Method 7E of appendix A of this part shall be used to determine the NO_X concentrations. Method 3A or 3B of appendix A of this part shall be used to determine O_2concentration.

(iii) The owner or operator shall identify and demonstrate to the Administrator's satisfaction suitable methods to determine the average hourly heat input rate to the combustion turbine and the average hourly heat input rate to the affected duct burner.

(iv) Compliance with the emissions limits under §60.44b(a)(4) or §60.44b(l) is determined by the three-run average (nominal 1-hour runs) for the initial and subsequent performance tests; or

(2) The owner or operator of an affected facility may elect to determine compliance on a 30-day rolling average basis by using the CEMS specified under §60.48b for measuring NO_X and O_2 and meet the requirements of §60.48b. The sampling site shall be located at the outlet from the steam generating unit. The NO_X emissions rate at the outlet from the steam generating unit shall constitute the NO_X emissions rate from the duct burner of the combined cycle system.

(g) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) shall demonstrate the maximum heat input capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. The owner or operator of an affected facility shall determine the maximum heat input capacity using the heat loss method or the heat input method described in sections 5 and 7.3 of the ASME *Power Test Codes* 4.1 (incorporated by reference, see §60.17). This demonstration of maximum heat input capacity shall be made during the initial performance test for affected facilities that meet the criteria of §60.44b(j). It shall be made within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of each facility, for affected facilities meeting the criteria of §60.44b(k). Subsequent demonstrations may be required by the Administrator at any other time. If this demonstration indicates that the maximum heat input capacity of the affected facility is less than that stated by the manufacturer of the affected facility, the maximum heat input capacity determined during this demonstration shall be used to determine the capacity utilization rate for the affected facility. Otherwise, the maximum heat input capacity provided by the manufacturer is used.

(h) The owner or operator of an affected facility described in §60.44b(j) that has a heat input capacity greater than 73 MW (250 MMBtu/hr) shall:

(1) Conduct an initial performance test as required under §60.8 over a minimum of 24 consecutive steam generating unit operating hours at maximum heat input capacity to demonstrate compliance with the NO_X emission standards under §60.44b using Method 7, 7A, 7E of appendix A of this part, or other approved reference methods; and

(2) Conduct subsequent performance tests once per calendar year or every 400 hours of operation (whichever comes first) to demonstrate compliance with the NO_X emission standards under §60.44b over a minimum of 3 consecutive steam generating unit operating hours at maximum heat input capacity using Method 7, 7A, 7E of appendix A of this part, or other approved reference methods.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the PM limit in paragraphs §60.43b(a)(4) or §60.43b(h)(5) shall follow the applicable procedures in §60.49b(r).

(j) 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 comply with the requirements specified in paragraphs (j)(1) through (j)(14) of this section.

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

(2) Notify the Administrator one 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 the 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 (j) 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 paragraphs (j)(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 (j)(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 (j)(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) After July 1, 2010 or after Method 202 of appendix M of part 51 has been revised to minimize artifact measurement and notice of that change has been published in the Federal Register, whichever is later, for condensable PM emissions, Method 202 of appendix M of part 51 shall be used; and

(iii) For O_2(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 per 30-day rolling average.

(14) After July 1, 2011, within 90 days after completing a correlation testing run, the owner or operator of an affected facility shall either successfully enter the test data into EPA's WebFIRE data base located at *http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main* or mail a copy to: United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; Mail Code: D243–01; RTP, NC 27711.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009]

§ 60.47b Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (b) and (f) of this section, the owner or operator of an affected facility subject to the SO_2standards in §60.42b shall install, calibrate, maintain, and operate CEMS for measuring SO_2 concentrations and either O_2 or CO_2 concentrations and shall record the output of the systems. For units complying with the percent reduction standard, the SO_2 and either O_2 or CO_2 concentrations shall both be monitored at the inlet and outlet of the SO_2 control device. If the owner or operator has installed and certified SO_2 and O_2 or CO_2 CEMS according to the requirements of §75.20(c)(1) of this chapter and appendix A to part 75 of this chapter, and is continuing to meet the ongoing quality assurance requirements of §75.21 of this chapter and appendix B to part 75 of this chapter, those CEMS may be used to meet the requirements of this section, provided that:

(1) When relative accuracy testing is conducted, SO_2concentration data and CO_2 (or O_2) data are collected simultaneously; and

(2) In addition to meeting the applicable $SO_2$and CO_2(or O_2) relative accuracy specifications in Figure 2 of appendix B to part 75 of this chapter, the relative accuracy (RA) standard in section 13.2 of Performance Specification 2 in appendix B to this part is met when the RA is calculated on a lb/MMBtu basis; and

(3) The reporting requirements of §60.49b are met. $SO_2$and CO_2(or O_2) data used to meet the requirements of §60.49b shall not include substitute data values derived from the missing data procedures in subpart D of part 75 of this chapter, nor shall the SO_2data have been bias adjusted according to the procedures of part 75 of this chapter.

(b) As an alternative to operating CEMS as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2emissions and percent reduction by:

(1) Collecting coal or oil samples in an as-fired condition at the inlet to the steam generating unit and analyzing them for sulfur and heat content according to 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_2input rate, or

(2) Measuring SO_2according to Method 6B of appendix A of this part at the inlet or outlet to the SO_2control 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_2measurement train operated at the candidate location and a second similar train operated according to the procedures in section 3.2 and the applicable procedures in section 7 of Performance Specification 2. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 or 3B 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.

(3) A daily SO_2 emission rate, E_D, shall be determined using the procedure described in Method 6A of appendix A of this part, section 7.6.2 (Equation 6A–8) and stated in ng/J (lb/MMBtu) heat input.

(4) The mean 30-day emission rate is calculated using the daily measured values in ng/J (lb/MMBtu) for 30 successive steam generating unit operating days using equation 19–20 of Method 19 of appendix A of this part.

(c) The owner or operator of an affected facility shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive boiler 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 or the reference methods and procedures as described in paragraph (b) of this section.

(d) The 1-hour average SO_2emission rates measured by the CEMS required by paragraph (a) of this section and required under §60.13(h) is expressed in ng/J or lb/MMBtu heat input and is used to calculate the average emission rates under §60.42(b). Each 1-hour average SO_2emission rate must be based on 30 or more minutes of steam generating unit operation. The hourly averages shall be calculated according to §60.13(h)(2). Hourly SO_2emission rates are not calculated if the affected facility is operated less than 30 minutes in a given clock hour and are not counted toward determination of a steam generating unit operating day.

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

(1) Except as provided for in paragraph (e)(4) of this section, 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) Except as provided for in paragraph (e)(4) of this section, 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 combusting coal or oil, alone or in combination with other fuels, the span value of the SO_2CEMS at the inlet to the SO_2control device is 125 percent of the maximum estimated hourly potential SO_2emissions of the fuel combusted, and the span value of the CEMS at the outlet to the SO_2control device is 50 percent of the maximum estimated hourly potential SO_2emissions of the fuel combusted. Alternatively, SO_2span values determined according to section 2.1.1 in appendix A to part 75 of this chapter may be used.

(4) As an alternative to meeting the requirements of requirements of paragraphs (e)(1) and (e)(2) of this section, the owner or operator may elect to implement the following alternative data accuracy assessment procedures:

(i) For all required $CO_2$and O_2monitors and for $SO_2$and NO_X monitors with span values greater than or equal to 100 ppm, the daily calibration error test and calibration adjustment procedures described in sections 2.1.1 and 2.1.3 of appendix B to part 75 of this chapter may be followed instead of the CD assessment procedures in Procedure 1, section 4.1 of appendix F to this part.

(ii) For all required $CO_2$and O_2monitors and for $SO_2$and NO_X monitors with span values greater than 30 ppm, quarterly linearity checks may be performed in accordance with section 2.2.1 of appendix B to part 75 of this chapter, instead of performing the cylinder gas audits (CGAs) described in Procedure 1, section 5.1.2 of appendix F to this part. If this option is selected: The frequency of the linearity checks shall be as specified in section 2.2.1 of appendix B to part 75 of this chapter; the applicable linearity specifications in section 3.2 of appendix A to part 75 of this chapter shall be met; the data validation and out-of-control criteria in section 2.2.3 of appendix B to part 75 of this chapter shall be followed instead of the excessive audit inaccuracy and out-of-control criteria in Procedure 1, section 5.2 of appendix F to this part; and the grace period provisions in section 2.2.4 of appendix B to part 75 of this chapter shall apply. For the purposes of data validation under this subpart, the cylinder gas audits described in Procedure 1, section 5.1.2 of appendix F to this part shall be performed for $SO_2$and NO_X span values less than or equal to 30 ppm; and

(iii) For SO_2, CO_2, and O_2monitoring systems and for NO_X emission rate monitoring systems, RATAs may be performed in accordance with section 2.3 of appendix B to part 75 of this chapter instead of following the procedures described in Procedure 1, section 5.1.1 of appendix F to this part. If this option is selected: The frequency of each RATA shall be as specified in section 2.3.1 of appendix B to part 75 of this chapter; the applicable relative accuracy specifications shown in Figure 2 in appendix B to part 75 of this chapter shall be met; the data validation and out-of-control criteria in section 2.3.2 of appendix B to part 75 of this chapter shall be followed instead of the excessive audit inaccuracy and out-of-control criteria in Procedure 1, section 5.2 of appendix F to this part; and the grace period provisions in section 2.3.3 of appendix B to part 75 of this chapter shall apply. For the purposes of data validation under this subpart, the relative accuracy specification in section 13.2 of Performance Specification 2 in appendix B to this part shall be met on a lb/MMBtu basis for SO_2(regardless of the SO_2emission level during the RATA), and for NO_X when the average NO_X emission rate measured by the reference method during the RATA is less than 0.100 lb/MMBtu.

(f) The owner or operator of an affected facility that combusts very low sulfur oil or is demonstrating compliance under §60.45b(k) is not subject to the emission monitoring requirements under paragraph (a) of this section if the owner or operator maintains fuel records as described in §60.49b(r).

[72 FR 32742, June 13, 2007, as amended at 74 FR 5087, Jan. 28, 2009]

§ 60.48b Emission monitoring for particulate matter and nitrogen oxides.

(a) Except as provided in paragraph (j) of this section, the owner or operator of an affected facility subject to the opacity standard under §60.43b shall install, calibrate, maintain, and operate a continuous opacity monitoring systems (COMS) for measuring the opacity of 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 under §60.43b and meeting the conditions under paragraphs (j)(1), (2), (3), (4), or (5) of this section who elects not to install 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 §60.43b and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. If during the initial 60 minutes of observation all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent, the observation period may be reduced from 3 hours to 60 minutes.

(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;

(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;

(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

(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 30 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 30 calendar days according to the requirements in §60.46d(d)(7).

(ii) If no visible emissions are observed for 30 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) Except as provided under paragraphs (g), (h), and (i) of this section, the owner or operator of an affected facility subject to a NO_X standard under §60.44b shall comply with either paragraphs (b)(1) or (b)(2) of this section.

(1) Install, calibrate, maintain, and operate CEMS for measuring NO_X and O_2 (or CO_2) emissions discharged to the atmosphere, and shall record the output of the system; or

(2) If the owner or operator has installed a NO_X emission rate CEMS to meet the requirements of part 75 of this chapter and is continuing to meet the ongoing requirements of part 75 of this chapter, that CEMS may be used to meet the requirements of this section, except that the owner or operator shall also meet the requirements of §60.49b. Data reported to meet the requirements of §60.49b shall not include data substituted using the missing data procedures in subpart D of part 75 of this chapter, nor shall the data have been bias adjusted according to the procedures of part 75 of this chapter.

(c) The CEMS required under paragraph (b) of this section 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.

(d) The 1-hour average NO_X emission rates measured by the continuous NO_X monitor required by paragraph (b) of this section and required under §60.13(h) shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.44b. The 1-hour averages shall be calculated using the data points required under §60.13(h)(2).

(e) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems.

(1) For affected facilities combusting coal, wood or municipal-type solid waste, the span value for a COMS shall be between 60 and 80 percent.

(2) For affected facilities combusting coal, oil, or natural gas, the span value for NO_X is determined using one of the following procedures:

(i) Except as provided under paragraph (e)(2)(ii) of this section, NO_X span values shall be determined as follows:

Fuel	Span values for NO_X (ppm)
Natural gas	500.

Fuel	Span values for NO_X (ppm)
Oil	500.
Coal	1,000.
Mixtures	500 (x + y) + 1,000z.

Where:

x = Fraction of total heat input derived from natural gas;

y = Fraction of total heat input derived from oil; and

z = Fraction of total heat input derived from coal.

(ii) As an alternative to meeting the requirements of paragraph (e)(2)(i) of this section, the owner or operator of an affected facility may elect to use the NO_X span values determined according to section 2.1.2 in appendix A to part 75 of this chapter.

(3) All span values computed under paragraph (e)(2)(i) of this section for combusting mixtures of regulated fuels are rounded to the nearest 500 ppm. Span values computed under paragraph (e)(2)(ii) of this section shall be rounded off according to section 2.1.2 in appendix A to part 75 of this chapter.

(f) When NO_X emission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 of appendix A of this part, Method 7A of appendix A of this part, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

(g) The owner or operator of an affected facility that has a heat input capacity of 73 MW (250 MMBtu/hr) or less, and that has an annual capacity factor for residual oil having a nitrogen content of 0.30 weight percent or less, natural gas, distillate oil, gasified coal, or any mixture of these fuels, greater than 10 percent (0.10) shall:

(1) Comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3), and (f) of this section; or

(2) Monitor steam generating unit operating conditions and predict NO_X emission rates as specified in a plan submitted pursuant to §60.49b(c).

(h) The owner or operator of a duct burner, as described in §60.41b, that is subject to the NO_X standards in §60.44b(a)(4), §60.44b(e), or §60.44b(l) is not required to install or operate a continuous emissions monitoring system to measure NO_X emissions.

(i) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) is not required to install or operate a CEMS for measuring NO_X emissions.

(j) The owner or operator of an affected facility that meets the conditions in either paragraph (j)(1), (2), (3), (4), (5), or (6) of this section is not required to install or operate a COMS if:

(1) The affected facility uses a PM CEMS to monitor PM emissions; or

(2) The affected facility burns only liquid (excluding residual oil) or gaseous fuels with potential SO_2 emissions rates of 26 ng/J (0.060 lb/MMBtu) or less and does not use a post-combustion technology to reduce SO_2 or PM emissions. The owner or operator must maintain fuel records of the sulfur content of the fuels burned, as described under §60.49b(r); or

(3) The affected facility burns coke oven gas alone or in combination with fuels meeting the criteria in paragraph (j)(2) of this section and does not use a post-combustion technology to reduce SO_2or PM emissions; or

(4) The affected facility 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 0.30 weight percent sulfur, and is operated such that emissions of CO to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a steam generating unit operating day average basis. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (j)(4)(i) through (iv) of this section; or

(i) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (j)(4)(i)(A) through (D) of this section.

(A) 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.

(B) 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).

(C) 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).

(D) 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.

(ii) 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.

(iii) 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.

(iv) You must record the CO measurements and calculations performed according to paragraph (j)(4) 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.

(5) The affected facility uses a bag leak detection system to monitor the performance of a fabric filter (baghouse) according to the most recent requirements in section §60.48Da of this part; or

(6) The affected facility burns only gaseous fuels or fuel oils that contain less than or equal to 0.30 weight percent sulfur and operates 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.

(k) 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 §60.46b(j). The CEMS specified in paragraph §60.46b(j) 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.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5087, Jan. 28, 2009]

§ 60.49b Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of initial startup, as provided by §60.7. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of the 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 §§60.42b(d)(1), 60.43b(a)(2), (a)(3)(iii), (c)(2)(ii), (d)(2)(iii), 60.44b(c), (d), (e), (i), (j), (k), 60.45b(d), (g), 60.46b(h), or 60.48b(i);

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

(4) Notification that an emerging technology will be used for controlling emissions of SO_2. The Administrator will examine the description of the emerging technology 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 §60.42b(a) unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO_2, PM, and/or NO_X emission limits under §§60.42b, 60.43b, and 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in appendix B of this part. The owner or operator of each affected facility described in §60.44b(j) or §60.44b(k) shall submit to the Administrator the maximum heat input capacity data from the demonstration of the maximum heat input capacity of the affected facility.

(c) The owner or operator of each affected facility subject to the NO_X standard in §60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions in the provisions of §60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored in §60.48b(g)(2) and the records to be maintained in §60.49b(g). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. An affected facility burning coke oven gas alone or in combination with other gaseous fuels or distillate oil shall submit this plan to the Administrator for approval within 360 days of the initial startup of the affected facility or by November 30, 2009, whichever date comes later. If the plan is approved, the owner or operator shall maintain records of predicted nitrogen oxide emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan. The plan shall:

(1) Identify the specific operating conditions to be monitored and the relationship between these operating conditions and NO_X emission rates (*i.e.* , ng/J or lbs/MMBtu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (*i.e.* , the ratio of primary air to secondary and/or tertiary air) and the level of excess air (*i.e.* , flue gas O_2level);

(2) Include the data and information that the owner or operator used to identify the relationship between NO_X emission rates and these operating conditions; and

(3) Identify how these operating conditions, including steam generating unit load, will be monitored under §60.48b(g) on an hourly basis by the owner or operator during the period of operation of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the owner or operator under §60.49b(g).

(d) Except as provided in paragraph (d)(2) of this section, the owner or operator of an affected facility shall record and maintain records as specified in paragraph (d)(1) of this section.

(1) The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

(2) As an alternative to meeting the requirements of paragraph (d)(1) of this section, the owner or operator of an affected facility that is subject to a federally enforceable permit restricting fuel use to a single fuel such that the facility is not required to continuously monitor any emissions (excluding opacity) or parameters indicative of emissions may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(e) For an affected facility that combusts residual oil and meets the criteria under §§60.46b(e)(4), 60.44b(j), or (k), the owner or operator shall maintain records of the nitrogen content of the residual oil combusted in the affected facility and calculate the average fuel nitrogen content for the reporting period. The nitrogen content shall be determined using ASTM Method D4629 (incorporated by reference, see §60.17), or fuel suppliers. If residual oil blends are being combusted, fuel nitrogen specifications may be prorated based on the ratio of residual oils of different nitrogen content in the fuel blend.

(f) For an affected facility subject to the opacity standard in §60.43b, the owner or operator shall maintain records of opacity. In addition, an owner or operator that elects to monitor emissions according to the requirements in §60.48b(a) shall maintain records according to the requirements specified in paragraphs (f)(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 (f)(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 (f)(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.

(g) Except as provided under paragraph (p) of this section, the owner or operator of an affected facility subject to the NO_X standards under §60.44b shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date;

(2) The average hourly NO_X emission rates (expressed as NO_2) (ng/J or lb/MMBtu heat input) measured or predicted;

(3) The 30-day average NO_X emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;

(4) Identification of the steam generating unit operating days when the calculated 30-day average NO_X emission rates are in excess of the NO_X emissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;

(5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

(6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;

(7) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(h) The owner or operator of any affected facility in any category listed in paragraphs (h)(1) or (2) of this section is required to submit excess emission reports for any excess emissions that occurred during the reporting period.

(1) Any affected facility subject to the opacity standards in §60.43b(f) or to the operating parameter monitoring requirements in §60.13(i)(1).

(2) Any affected facility that is subject to the NO_X standard of §60.44b, and that:

(i) Combusts natural gas, distillate oil, gasified coal, or residual oil with a nitrogen content of 0.3 weight percent or less; or

(ii) Has a heat input capacity of 73 MW (250 MMBtu/hr) or less and is required to monitor NO_X emissions on a continuous basis under §60.48b(g)(1) or steam generating unit operating conditions under §60.48b(g)(2).

(3) For the purpose of §60.43b, excess emissions are defined as all 6-minute periods during which the average opacity exceeds the opacity standards under §60.43b(f).

(4) For purposes of §60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average NO_X emission rate, as determined under §60.46b(e), that exceeds the applicable emission limits in §60.44b.

(i) The owner or operator of any affected facility subject to the continuous monitoring requirements for NO_X under §60.48(b) shall submit reports containing the information recorded under paragraph (g) of this section.

(j) The owner or operator of any affected facility subject to the SO_2standards under §60.42b shall submit reports.

(k) For each affected facility subject to the compliance and performance testing requirements of §60.45b and the reporting requirement in paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates covered in the reporting period;

(2) Each 30-day average SO_2emission rate (ng/J or lb/MMBtu heat input) measured during the reporting period, ending with the last 30-day period; reasons for noncompliance with the emission standards; and a description of corrective actions taken; For an exceedance due to maintenance of the SO_2control system covered in paragraph 60.45b(a), the report shall identify the days on which the maintenance was performed and a description of the maintenance;

(3) Each 30-day average percent reduction in SO_2emissions calculated during the reporting period, ending with the last 30-day period; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(4) Identification of the steam generating unit operating days that coal or oil was combusted and for which SO_2or diluent (O_2or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours in the steam generating unit operating day; justification for not obtaining sufficient data; and description of corrective action taken;

(5) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action 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 “F” factor used for calculations, method of determination, and type of fuel combusted;

(7) Identification of times when hourly averages have been obtained based on manual sampling methods;

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3;

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part; and

(11) The annual capacity factor of each fired as provided under paragraph (d) of this section.

(l) For each affected facility subject to the compliance and performance testing requirements of §60.45b(d) and the reporting requirements of paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates when the facility was in operation during the reporting period;

(2) The 24-hour average SO_2 emission rate measured for each steam generating unit operating day during the reporting period that coal or oil was combusted, ending in the last 24-hour period in the quarter; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(3) Identification of the steam generating unit operating days that coal or oil was combusted for which $S0_2$or diluent (O_2or 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 description of corrective action taken;

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

(5) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted;

(6) Identification of times when hourly averages have been obtained based on manual sampling methods;

(7) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(8) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

(9) Results of daily CEMS drift tests and quarterly accuracy assessments as required under Procedure 1 of appendix F 1 of this part. If the owner or operator elects to implement the alternative data assessment procedures described in §§60.47b(e)(4)(i) through (e)(4)(iii), each data assessment report shall include a summary of the results of all of the RATAs, linearity checks, CGAs, and calibration error or drift assessments required by §§60.47b(e)(4)(i) through (e)(4)(iii).

(m) For each affected facility subject to the SO_2standards in §60.42(b) for which the minimum amount of data required in §60.47b(c) were not obtained during the reporting period, the following information is reported to the Administrator in addition to that required under paragraph (k) of this section:

(1) The number of hourly averages available for outlet emission rates and inlet emission rates;

(2) The standard deviation of hourly averages for outlet emission rates and inlet emission rates, as determined in Method 19 of appendix A of this part, section 7;

(3) The lower confidence limit for the mean outlet emission rate and the upper confidence limit for the mean inlet emission rate, as calculated in Method 19 of appendix A of this part, section 7; and

(4) The ratio of the lower confidence limit for the mean outlet emission rate and the allowable emission rate, as determined in Method 19 of appendix A of this part, section 7.

(n) If a percent removal efficiency by fuel pretreatment (*i.e.* , $\%R_f$) is used to determine the overall percent reduction (*i.e.* , $\%R_o$) under §60.45b, the owner or operator of the affected facility shall submit a signed statement with the report.

(1) Indicating what removal efficiency by fuel pretreatment (*i.e.* , $\%R_f$) was credited during the reporting period;

(2) Listing the quantity, heat content, and date each pre-treated fuel shipment was received during the reporting period, the name and location of the fuel pretreatment facility; and the total quantity and total heat content of all fuels received at the affected facility during the reporting period;

(3) Documenting the transport of the fuel from the fuel pretreatment facility to the steam generating unit; and

(4) Including a signed statement from the owner or operator of the fuel pretreatment facility certifying that the percent removal efficiency achieved by fuel pretreatment was determined in accordance with the provisions of Method 19 of appendix A of this part and listing the heat content and sulfur content of each fuel before and after fuel pretreatment.

(o) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of 2 years following the date of such record.

(p) The owner or operator of an affected facility described in §60.44b(j) or (k) shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date;

(2) The number of hours of operation; and

(3) A record of the hourly steam load.

(q) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) shall submit to the Administrator a report containing:

(1) The annual capacity factor over the previous 12 months;

(2) The average fuel nitrogen content during the reporting period, if residual oil was fired; and

(3) If the affected facility meets the criteria described in §60.44b(j), the results of any NO_X emission tests required during the reporting period, the hours of operation during the reporting period, and the hours of operation since the last NO_X emission test.

(r) The owner or operator of an affected facility who elects to use the fuel based compliance alternatives in §60.42b or §60.43b shall either:

(1) The owner or operator of an affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil, natural gas, wood, a mixture of these fuels, or any of these fuels (or a mixture of these fuels) in combination with other fuels that are known to contain an insignificant amount of sulfur in §60.42b(j) or §60.42b(k) shall obtain and maintain at the affected facility fuel receipts from the fuel supplier that certify that the oil meets the definition of distillate oil and gaseous fuel meets the definition of natural gas as defined in §60.41b and the applicable sulfur limit. For the purposes of this section, the distillate oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition, natural gas, wood, and/or other fuels that are known to contain insignificant amounts of sulfur were combusted in the affected facility during the reporting period; or

(2) The owner or operator of an affected facility who elects to demonstrate compliance based on fuel analysis in §60.42b or §60.43b shall develop and submit a site-specific fuel analysis plan to the Administrator for review and approval no later than 60 days before the date you intend to demonstrate compliance. Each fuel analysis plan shall include a minimum initial requirement of weekly testing and each analysis report shall contain, at a minimum, the following information:

(i) The potential sulfur emissions rate of the representative fuel mixture in ng/J heat input;

(ii) The method used to determine the potential sulfur emissions rate of each constituent of the mixture. For distillate oil and natural gas a fuel receipt or tariff sheet is acceptable;

(iii) The ratio of different fuels in the mixture; and

(iv) The owner or operator can petition the Administrator to approve monthly or quarterly sampling in place of weekly sampling.

(s) Facility specific NO_X standard for Cytec Industries Fortier Plant's C.AOG incinerator located in Westwego, Louisiana:

(1) *Definitions* .

Oxidation zone is defined as the portion of the C.AOG incinerator that extends from the inlet of the oxidizing zone combustion air to the outlet gas stack.

Reducing zone is defined as the portion of the C.AOG incinerator that extends from the burner section to the inlet of the oxidizing zone combustion air.

Total inlet air is defined as the total amount of air introduced into the C.AOG incinerator for combustion of natural gas and chemical by-product waste and is equal to the sum of the air flow into the reducing zone and the air flow into the oxidation zone.

(2) *Standard for nitrogen oxides* . (i) When fossil fuel alone is combusted, the NO_X emission limit for fossil fuel in §60.44b(a) applies.

(ii) When natural gas and chemical by-product waste are simultaneously combusted, the NO_X emission limit is 289 ng/J (0.67 lb/MMBtu) and a maximum of 81 percent of the total inlet air provided for combustion shall be provided to the reducing zone of the C.AOG incinerator.

(3) *Emission monitoring* . (i) The percent of total inlet air provided to the reducing zone shall be determined at least every 15 minutes by measuring the air flow of all the air entering the reducing zone and the air flow of all the air entering the oxidation zone, and compliance with the percentage of total inlet air that is provided to the reducing zone shall be determined on a 3-hour average basis.

(ii) The NO_X emission limit shall be determined by the compliance and performance test methods and procedures for NO_X in §60.46b(i).

(iii) The monitoring of the NO_X emission limit shall be performed in accordance with §60.48b.

(4) *Reporting and recordkeeping requirements* . (i) The owner or operator of the C.AOG incinerator shall submit a report on any excursions from the limits required by paragraph (a)(2) of this section to the Administrator with the quarterly report required by paragraph (i) of this section.

(ii) The owner or operator of the C.AOG incinerator shall keep records of the monitoring required by paragraph (a)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner of operator of the C.AOG incinerator shall perform all the applicable reporting and recordkeeping requirements of this section.

(t) Facility-specific NO_X standard for Rohm and Haas Kentucky Incorporated's Boiler No. 100 located in Louisville, Kentucky:

(1) *Definitions* .

Air ratio control damper is defined as the part of the low NO_X burner that is adjusted to control the split of total combustion air delivered to the reducing and oxidation portions of the combustion flame.

Flue gas recirculation line is defined as the part of Boiler No. 100 that recirculates a portion of the boiler flue gas back into the combustion air.

(2) *Standard for nitrogen oxides* . (i) When fossil fuel alone is combusted, the NO_X emission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical by-product waste are simultaneously combusted, the NO_X emission limit is 473 ng/J (1.1 lb/MMBtu), and the air ratio control damper tee handle shall be at a minimum of 5 inches (12.7 centimeters) out of the boiler, and the flue gas recirculation line shall be operated at a minimum of 10 percent open as indicated by its valve opening position indicator.

(3) *Emission monitoring for nitrogen oxides* . (i) The air ratio control damper tee handle setting and the flue gas recirculation line valve opening position indicator setting shall be recorded during each 8-hour operating shift.

(ii) The NO_X emission limit shall be determined by the compliance and performance test methods and procedures for NO_X in §60.46b.

(iii) The monitoring of the NO_X emission limit shall be performed in accordance with §60.48b.

(4) *Reporting and recordkeeping requirements* . (i) The owner or operator of Boiler No. 100 shall submit a report on any excursions from the limits required by paragraph (b)(2) of this section to the Administrator with the quarterly report required by §60.49b(i).

(ii) The owner or operator of Boiler No. 100 shall keep records of the monitoring required by paragraph (b)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner of operator of Boiler No. 100 shall perform all the applicable reporting and recordkeeping requirements of §60.49b.

(u) *Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia* . (1) This paragraph (u) applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia (“site”) and only to the natural gas-fired boilers installed as part of the powerhouse conversion required pursuant to 40 CFR 52.2454(g). The requirements of this paragraph shall apply, and the requirements of §§60.40b through 60.49b(t) shall not apply, to the natural gas-fired boilers installed pursuant to 40 CFR 52.2454(g).

(i) The site shall equip the natural gas-fired boilers with low NO_X technology.

(ii) The site shall install, calibrate, maintain, and operate a continuous monitoring and recording system for measuring NO_X emissions discharged to the atmosphere and opacity using a continuous emissions monitoring system or a predictive emissions monitoring system.

(iii) Within 180 days of the completion of the powerhouse conversion, as required by 40 CFR 52.2454, the site shall perform a performance test to quantify criteria pollutant emissions.

(2) [Reserved]

(v) The owner or operator of an affected facility may submit electronic quarterly reports for SO_2 and/or NO_X and/or opacity in lieu of submitting the written reports required under paragraphs (h), (i), (j), (k) or (l) of this section. The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format.

(w) The reporting period for the reports required under this subpart is each 6 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.

(x) Facility-specific NO_X standard for Weyerhaeuser Company's No. 2 Power Boiler located in New Bern, North Carolina:

(1) *Standard for nitrogen oxides* . (i) When fossil fuel alone is combusted, the NO_X emission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical by-product waste are simultaneously combusted, the NO_X emission limit is 215 ng/J (0.5 lb/MMBtu).

(2) *Emission monitoring for nitrogen oxides* . (i) The NO_X emissions shall be determined by the compliance and performance test methods and procedures for NO_X in §60.46b.

(ii) The monitoring of the NO_X emissions shall be performed in accordance with §60.48b.

(3) *Reporting and recordkeeping requirements* . (i) The owner or operator of the No. 2 Power Boiler shall submit a report on any excursions from the limits required by paragraph (x)(2) of this section to the Administrator with the quarterly report required by §60.49b(i).

(ii) The owner or operator of the No. 2 Power Boiler shall keep records of the monitoring required by paragraph (x)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner or operator of the No. 2 Power Boiler shall perform all the applicable reporting and recordkeeping requirements of §60.49b.

(y) Facility-specific NO_X standard for INEOS USA's AOGI located in Lima, Ohio:

(1) *Standard for NO* $_X$. (i) When fossil fuel alone is combusted, the NO_X emission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical byproduct/waste are simultaneously combusted, the NO_X emission limit is 645 ng/J (1.5 lb/MMBtu).

(2) *Emission monitoring for NO* $_X$. (i) The NO_X emissions shall be determined by the compliance and performance test methods and procedures for NO_X in §60.46b.

(ii) The monitoring of the NO_X emissions shall be performed in accordance with §60.48b.

(3) *Reporting and recordkeeping requirements* . (i) The owner or operator of the AOGI shall submit a report on any excursions from the limits required by paragraph (y)(2) of this section to the Administrator with the quarterly report required by paragraph (i) of this section.

(ii) The owner or operator of the AOGI shall keep records of the monitoring required by paragraph (y)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner or operator of the AOGI shall perform all the applicable reporting and recordkeeping requirements of this section.

Indiana Department of Environmental Management
Office of Air Quality

Attachment C

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart VVa—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006

Source: 72 FR 64883, Nov. 16, 2007, unless otherwise noted.

§ 60.480a Applicability and designation of affected facility.

(a)(1) The provisions of this subpart apply to affected facilities in the synthetic organic chemicals manufacturing industry.

(2) The group of all equipment (defined in §60.481a) within a process unit is an affected facility.

(b) Any affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after November 7, 2006, shall be subject to the requirements of this subpart.

(c) Addition or replacement of equipment for the purpose of process improvement which is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.

(d)(1) If an owner or operator applies for one or more of the exemptions in this paragraph, then the owner or operator shall maintain records as required in §60.486a(i).

(2) Any affected facility that has the design capacity to produce less than 1,000 Mg/yr (1,102 ton/yr) of a chemical listed in §60.489 is exempt from §§60.482–1a through 60.482–11a.

(3) If an affected facility produces heavy liquid chemicals only from heavy liquid feed or raw materials, then it is exempt from §§60.482–1a through 60.482–11a.

(4) Any affected facility that produces beverage alcohol is exempt from §§60.482–1a through 60.482–11a.

(5) Any affected facility that has no equipment in volatile organic compounds (VOC) service is exempt from §§60.482–1a through 60.482–11a.

(e) *Alternative means of compliance* —(1) *Option to comply with part 65.* (i) Owners or operators may choose to comply with the provisions of 40 CFR part 65, subpart F, to satisfy the requirements of §§60.482–1a through 60.487a for an affected facility. When choosing to comply with 40 CFR part 65, subpart F, the requirements of §§60.485a(d), (e), and (f), and 60.486a(i) and (j) still apply. Other provisions applying to an owner or operator who chooses to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(ii) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 65, subpart F must also comply with §§60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for that equipment. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(1)(ii) do not apply to owners or operators of equipment subject to this subpart complying with 40 CFR part 65, subpart F, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart F, must comply with 40 CFR part 65, subpart A.

(2) *Part 63, subpart H.* (i) Owners or operators may choose to comply with the provisions of 40 CFR part 63, subpart H, to satisfy the requirements of §§60.482–1a through 60.487a for an affected facility. When choosing to comply with 40 CFR part 63, subpart H, the requirements of §60.485a(d), (e), and (f), and §60.486a(i) and (j) still apply.

(ii) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 63, subpart H must also comply with §§60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for that equipment. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(2)(ii) do not apply to owners or operators of equipment subject to this subpart complying with 40 CFR part 63, subpart H, except that provisions required to be met prior to implementing 40 CFR part 63 still apply. Owners and operators who choose to comply with 40 CFR part 63, subpart H, must comply with 40 CFR part 63, subpart A.

(f) *Stay of standards.* (1) Owners or operators that start a new, reconstructed, or modified affected source prior to November 16, 2007 are not required to comply with the requirements in this paragraph until EPA takes final action to require compliance and publishes a document in the Federal Register.

(i) The definition of “capital expenditure” in §60.481a of this subpart. While the definition of “capital expenditure” is stayed, owners or operators should use the definition found in §60.481 of subpart VV of this part.

(ii) [Reserved]

(2) Owners or operators are not required to comply with the requirements in this paragraph until EPA takes final action to require compliance and publishes a document in the Federal Register.

(i) The definition of “process unit” in §60.481a of this subpart. While the definition of “process unit” is stayed, owners or operators should use the following definition:

Process unit means components assembled to produce, as intermediate or final products, one or more of the chemicals listed in §60.489 of this part. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product.

(ii) The method of allocation of shared storage vessels in §60.482–1a(g) of this subpart.

(iii) The standards for connectors in gas/vapor service and in light liquid service in §60.482–11a of this subpart.

[72 FR 64883, Nov. 16, 2007, as amended at 73 FR 31375, June 2, 2008]

§ 60.481a Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act (CAA) or in subpart A of part 60, and the following terms shall have the specific meanings given them.

Capital expenditure means, in addition to the definition in 40 CFR 60.2, an expenditure for a physical or operational change to an existing facility that:

(a) Exceeds P, the product of the facility's replacement cost, R, and an adjusted annual asset guideline repair allowance, A, as reflected by the following equation: $P = R \times A$, where:

(1) The adjusted annual asset guideline repair allowance, A, is the product of the percent of the replacement cost, Y, and the applicable basic annual asset guideline repair allowance, B, divided by 100 as reflected by the following equation:

$A = Y \times (B \div 100)$;

(2) The percent Y is determined from the following equation: Y = 1.0 − 0.575 log X, where X is 2006 minus the year of construction; and

(3) The applicable basic annual asset guideline repair allowance, B, is selected from the following table consistent with the applicable subpart:

Table for Determining Applicable Value for B

Subpart applicable to facility	Value of B to be used in equation
VVa	12.5
GGGa	7.0

Closed-loop system means an enclosed system that returns process fluid to the process.

Closed-purge system means a system or combination of systems and portable containers to capture purged liquids. Containers for purged liquids must be covered or closed when not being filled or emptied.

Closed vent system means a system that is not open to the atmosphere and that is composed of hard-piping, ductwork, connections, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device or back to a process.

Connector means flanged, screwed, or other joined fittings used to connect two pipe lines or a pipe line and a piece of process equipment or that close an opening in a pipe that could be connected to another pipe. Joined fittings welded completely around the circumference of the interface are not considered connectors for the purpose of this regulation.

Control device means an enclosed combustion device, vapor recovery system, or flare.

Distance piece means an open or enclosed casing through which the piston rod travels, separating the compressor cylinder from the crankcase.

Double block and bleed system means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

Duct work means a conveyance system such as those commonly used for heating and ventilation systems. It is often made of sheet metal and often has sections connected by screws or crimping. Hard-piping is not ductwork.

Equipment means each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector in VOC service and any devices or systems required by this subpart.

First attempt at repair means to take action for the purpose of stopping or reducing leakage of organic material to the atmosphere using best practices.

Fuel gas means gases that are combusted to derive useful work or heat.

Fuel gas system means the offsite and onsite piping and flow and pressure control system that gathers gaseous stream(s) generated by onsite operations, may blend them with other sources of gas, and transports the gaseous stream for use as fuel gas in combustion devices or in-process combustion equipment, such as furnaces and gas turbines, either singly or in combination.

Hard-piping means pipe or tubing that is manufactured and properly installed using good engineering judgment and standards such as ASME B31.3, Process Piping (available from the American Society of Mechanical Engineers, P.O. Box 2300, Fairfield, NJ 07007–2300).

In gas/vapor service means that the piece of equipment contains process fluid that is in the gaseous state at operating conditions.

In heavy liquid service means that the piece of equipment is not in gas/vapor service or in light liquid service.

In light liquid service means that the piece of equipment contains a liquid that meets the conditions specified in §60.485a(e).

In-situ sampling systems means nonextractive samplers or in-line samplers.

In vacuum service means that equipment is operating at an internal pressure which is at least 5 kilopascals (kPa) (0.7 psia) below ambient pressure.

In VOC service means that the piece of equipment contains or contacts a process fluid that is at least 10 percent VOC by weight. (The provisions of §60.485a(d) specify how to determine that a piece of equipment is not in VOC service.)

Initial calibration value means the concentration measured during the initial calibration at the beginning of each day required in §60.485a(b)(1), or the most recent calibration if the instrument is recalibrated during the day (i.e., the calibration is adjusted) after a calibration drift assessment.

Liquids dripping means any visible leakage from the seal including spraying, misting, clouding, and ice formation.

Open-ended valve or line means any valve, except safety relief valves, having one side of the valve seat in contact with process fluid and one side open to the atmosphere, either directly or through open piping.

Pressure release means the emission of materials resulting from system pressure being greater than set pressure of the pressure relief device.

Process improvement means routine changes made for safety and occupational health requirements, for energy savings, for better utility, for ease of maintenance and operation, for correction of design deficiencies, for bottleneck removal, for changing product requirements, or for environmental control.

Process unit means the components assembled and connected by pipes or ducts to process raw materials and to produce, as intermediate or final products, one or more of the chemicals listed in §60.489. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product. For the purpose of this subpart, process unit includes any feed, intermediate and final product storage vessels (except as specified in §60.482–1a(g)), product transfer racks, and connected ducts and piping. A process unit includes all equipment as defined in this subpart.

Process unit shutdown means a work practice or operational procedure that stops production from a process unit or part of a process unit during which it is technically feasible to clear process material from a process unit or part of a process unit consistent with safety constraints and during which repairs can be accomplished. The following are not considered process unit shutdowns:

(1) An unscheduled work practice or operational procedure that stops production from a process unit or part of a process unit for less than 24 hours.

(2) An unscheduled work practice or operational procedure that would stop production from a process unit or part of a process unit for a shorter period of time than would be required to clear the process unit or part of the process unit of materials and start up the unit, and would result in greater emissions than delay of repair of leaking components until the next scheduled process unit shutdown.

(3) The use of spare equipment and technically feasible bypassing of equipment without stopping production.

Quarter means a 3-month period; the first quarter concludes on the last day of the last full month during the 180 days following initial startup.

Repaired means that equipment is adjusted, or otherwise altered, in order to eliminate a leak as defined in the applicable sections of this subpart and, except for leaks identified in accordance with §§60.482–2a(b)(2)(ii) and (d)(6)(ii) and (d)(6)(iii), 60.482–3a(f), and 60.482–10a(f)(1)(ii), is re-monitored as specified in §60.485a(b) to verify that emissions from the equipment are below the applicable leak definition.

Replacement cost means the capital needed to purchase all the depreciable components in a facility.

Sampling connection system means an assembly of equipment within a process unit used during periods of representative operation to take samples of the process fluid. Equipment used to take nonroutine grab samples is not considered a sampling connection system.

Sensor means a device that measures a physical quantity or the change in a physical quantity such as temperature, pressure, flow rate, pH, or liquid level.

Storage vessel means a tank or other vessel that is used to store organic liquids that are used in the process as raw material feedstocks, produced as intermediates or final products, or generated as wastes. Storage vessel does not include vessels permanently attached to motor vehicles, such as trucks, railcars, barges or ships.

Synthetic organic chemicals manufacturing industry means the industry that produces, as intermediates or final products, one or more of the chemicals listed in §60.489.

Transfer rack means the collection of loading arms and loading hoses, at a single loading rack, that are used to fill tank trucks and/or railcars with organic liquids.

Volatile organic compounds or VOC means, for the purposes of this subpart, any reactive organic compounds as defined in §60.2 Definitions.

Effective Date Note: At 73 FR 31376, June 2, 2008, in §60.481a, the definitions of “capital expenditure” and “process unit” were stayed until further notice.

§ 60.482-1a Standards: General.

(a) Each owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of §§60.482–1a through 60.482–10a or §60.480a(e) for all equipment within 180 days of initial startup.

(b) Compliance with §§60.482–1a to 60.482–10a will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in §60.485a.

(c)(1) An owner or operator may request a determination of equivalence of a means of emission limitation to the requirements of §§60.482–2a, 60.482–3a, 60.482–5a, 60.482–6a, 60.482–7a, 60.482–8a, and 60.482–10a as provided in §60.484a.

(2) If the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of §§60.482–2a, 60.482–3a, 60.482–5a, 60.482–6a, 60.482–7a, 60.482–8a, or 60.482–10a, an owner or operator shall comply with the requirements of that determination.

(d) Equipment that is in vacuum service is excluded from the requirements of §§60.482–2a through 60.482–10a if it is identified as required in §60.486a(e)(5).

(e) Equipment that an owner or operator designates as being in VOC service less than 300 hr/yr is excluded from the requirements of §§60.482–2a through 60.482–11a if it is identified as required in §60.486a(e)(6) and it meets any of the conditions specified in paragraphs (e)(1) through (3) of this section.

(1) The equipment is in VOC service only during startup and shutdown, excluding startup and shutdown between batches of the same campaign for a batch process.

(2) The equipment is in VOC service only during process malfunctions or other emergencies.

(3) The equipment is backup equipment that is in VOC service only when the primary equipment is out of service.

(f)(1) If a dedicated batch process unit operates less than 365 days during a year, an owner or operator may monitor to detect leaks from pumps, valves, and open-ended valves or lines at the frequency specified in the following table instead of monitoring as specified in §§60.482–2a, 60.482–7a, and 60.483.2a:

	Equivalent monitoring frequency time in use		
Operating time (percent of hours during year)	**Monthly**	**Quarterly**	**Semiannually**
0 to <25	Quarterly	Annually	Annually.
25 to <50	Quarterly	Semiannually	Annually.
50 to <75	Bimonthly	Three quarters	Semiannually.
75 to 100	Monthly	Quarterly	Semiannually.

(2) Pumps and valves that are shared among two or more batch process units that are subject to this subpart may be monitored at the frequencies specified in paragraph (f)(1) of this section, provided the operating time of all such process units is considered.

(3) The monitoring frequencies specified in paragraph (f)(1) of this section are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. An owner or operator may monitor at any time during the specified monitoring period (e.g., month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. Reasonable intervals are defined in paragraphs (f)(3)(i) through (iv) of this section.

(i) When monitoring is conducted quarterly, monitoring events must be separated by at least 30 calendar days.

(ii) When monitoring is conducted semiannually (*i.e.* , once every 2 quarters), monitoring events must be separated by at least 60 calendar days.

(iii) When monitoring is conducted in 3 quarters per year, monitoring events must be separated by at least 90 calendar days.

(iv) When monitoring is conducted annually, monitoring events must be separated by at least 120 calendar days.

(g) If the storage vessel is shared with multiple process units, the process unit with the greatest annual amount of stored materials (predominant use) is the process unit the storage vessel is assigned to. If the storage vessel is shared equally among process units, and one of the process units has equipment subject to this subpart, the storage vessel is assigned to that process unit. If the storage vessel is shared equally among process units, none of which have equipment subject to this subpart of this part, the storage vessel is assigned to any process unit subject to subpart VV of this part. If the predominant use of the storage vessel varies from year to year, then the owner or operator must estimate the predominant use initially and reassess every 3 years. The owner or operator must keep records of the information and supporting calculations that show how predominant use is determined. All equipment on the storage vessel must be monitored when in VOC service.

Effective Date Note: At 73 FR 31376, June 2, 2008, in §60.482–1a, paragraph (g) was stayed until further notice.

§ 60.482-2a Standards: Pumps in light liquid service.

(a)(1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in §60.485a(b), except as provided in §60.482–1a(c) and (f) and paragraphs (d), (e), and (f) of this section. A pump that begins operation in light liquid service after the initial startup date for the process unit must be monitored for the first time within 30 days after the end of its startup period, except for a pump that replaces a leaking pump and except as provided in §60.482–1a(c) and paragraphs (d), (e), and (f) of this section.

(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal, except as provided in §60.482–1a(f).

(b)(1) The instrument reading that defines a leak is specified in paragraphs (b)(1)(i) and (ii) of this section.

(i) 5,000 parts per million (ppm) or greater for pumps handling polymerizing monomers;

(ii) 2,000 ppm or greater for all other pumps.

(2) If there are indications of liquids dripping from the pump seal, the owner or operator shall follow the procedure specified in either paragraph (b)(2)(i) or (ii) of this section. This requirement does not apply to a pump that was monitored after a previous weekly inspection and the instrument reading was less than the concentration specified in paragraph (b)(1)(i) or (ii) of this section, whichever is applicable.

(i) Monitor the pump within 5 days as specified in §60.485a(b). A leak is detected if the instrument reading measured during monitoring indicates a leak as specified in paragraph (b)(1)(i) or (ii) of this section, whichever is applicable. The leak shall be repaired using the procedures in paragraph (c) of this section.

(ii) Designate the visual indications of liquids dripping as a leak, and repair the leak using either the procedures in paragraph (c) of this section or by eliminating the visual indications of liquids dripping.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482–9a.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the practices described in paragraphs (c)(2)(i) and (ii) of this section, where practicable.

(i) Tightening the packing gland nuts;

(ii) Ensuring that the seal flush is operating at design pressure and temperature.

(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a) of this section, provided the requirements specified in paragraphs (d)(1) through (6) of this section are met.

(1) Each dual mechanical seal system is:

(i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

(ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §60.482–10a; or

(iii) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(2) The barrier fluid system is in heavy liquid service or is not in VOC service.

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4)(i) Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

(ii) If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the owner or operator shall follow the procedure specified in either paragraph (d)(4)(ii)(A) or (B) of this section prior to the next required inspection.

(A) Monitor the pump within 5 days as specified in §60.485a(b) to determine if there is a leak of VOC in the barrier fluid. If an instrument reading of 2,000 ppm or greater is measured, a leak is detected.

(B) Designate the visual indications of liquids dripping as a leak.

(5)(i) Each sensor as described in paragraph (d)(3) is checked daily or is equipped with an audible alarm.

(ii) The owner or operator determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(iii) If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion established in paragraph (d)(5)(ii) of this section, a leak is detected.

(6)(i) When a leak is detected pursuant to paragraph (d)(4)(ii)(A) of this section, it shall be repaired as specified in paragraph (c) of this section.

(ii) A leak detected pursuant to paragraph (d)(5)(iii) of this section shall be repaired within 15 days of detection by eliminating the conditions that activated the sensor.

(iii) A designated leak pursuant to paragraph (d)(4)(ii)(B) of this section shall be repaired within 15 days of detection by eliminating visual indications of liquids dripping.

(e) Any pump that is designated, as described in §60.486a(e)(1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a), (c), and (d) of this section if the pump:

(1) Has no externally actuated shaft penetrating the pump housing;

(2) Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in §60.485a(c); and

(3) Is tested for compliance with paragraph (e)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(f) If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of §60.482–10a, it is exempt from paragraphs (a) through (e) of this section.

(g) Any pump that is designated, as described in §60.486a(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of paragraphs (a) and (d)(4) through (6) of this section if:

(1) The owner or operator of the pump demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section; and

(2) The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph (c) of this section if a leak is detected.

(h) Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (a)(2) and (d)(4) of this section, and the daily requirements of paragraph (d)(5) of this section, provided that each pump is visually inspected as often as practicable and at least monthly.

§ 60.482-3a Standards: Compressors.

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in §60.482–1a(c) and paragraphs (h), (i), and (j) of this section.

(b) Each compressor seal system as required in paragraph (a) of this section shall be:

(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

(2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §60.482–10a; or

(3) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(c) The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

(d) Each barrier fluid system as described in paragraph (a) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e)(1) Each sensor as required in paragraph (d) of this section shall be checked daily or shall be equipped with an audible alarm.

(2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under paragraph (e)(2) of this section, a leak is detected.

(g)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482–9a.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(h) A compressor is exempt from the requirements of paragraphs (a) and (b) of this section, if it is equipped with a closed vent system to capture and transport leakage from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of §60.482–10a, except as provided in paragraph (i) of this section.

(i) Any compressor that is designated, as described in §60.486a(e)(1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a) through (h) of this section if the compressor:

(1) Is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the methods specified in §60.485a(c); and

(2) Is tested for compliance with paragraph (i)(1) of this section initially upon designation, annually, and at other times requested by the Administrator.

(j) Any existing reciprocating compressor in a process unit which becomes an affected facility under provisions of §60.14 or §60.15 is exempt from paragraphs (a) through (e) and (h) of this section, provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of paragraphs (a) through (e) and (h) of this section.

§ 60.482-4a Standards: Pressure relief devices in gas/vapor service.

(a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in §60.485a(c).

(b)(1) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in §60.482–9a.

(2) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in §60.485a(c).

(c) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in §60.482–10a is exempted from the requirements of paragraphs (a) and (b) of this section.

(d)(1) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (a) and (b) of this section, provided the owner or operator complies with the requirements in paragraph (d)(2) of this section.

(2) After each pressure release, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §60.482–9a.

§ 60.482-5a Standards: Sampling connection systems.

(a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in §60.482–1a(c) and paragraph (c) of this section.

(b) Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall comply with the requirements specified in paragraphs (b)(1) through (4) of this section.

(1) Gases displaced during filling of the sample container are not required to be collected or captured.

(2) Containers that are part of a closed-purge system must be covered or closed when not being filled or emptied.

(3) Gases remaining in the tubing or piping between the closed-purge system valve(s) and sample container valve(s) after the valves are closed and the sample container is disconnected are not required to be collected or captured.

(4) Each closed-purge, closed-loop, or closed-vent system shall be designed and operated to meet requirements in either paragraph (b)(4)(i), (ii), (iii), or (iv) of this section.

(i) Return the purged process fluid directly to the process line.

(ii) Collect and recycle the purged process fluid to a process.

(iii) Capture and transport all the purged process fluid to a control device that complies with the requirements of §60.482–10a.

(iv) Collect, store, and transport the purged process fluid to any of the following systems or facilities:

(A) A waste management unit as defined in 40 CFR 63.111, if the waste management unit is subject to and operated in compliance with the provisions of 40 CFR part 63, subpart G, applicable to Group 1 wastewater streams;

(B) A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266;

(C) A facility permitted, licensed, or registered by a state to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261;

(D) A waste management unit subject to and operated in compliance with the treatment requirements of 40 CFR 61.348(a), provided all waste management units that collect, store, or transport the purged process fluid to the treatment unit are subject to and operated in compliance with the management requirements of 40 CFR 61.343 through 40 CFR 61.347; or

(E) A device used to burn off-specification used oil for energy recovery in accordance with 40 CFR part 279, subpart G, provided the purged process fluid is not hazardous waste as defined in 40 CFR part 261.

(c) In-situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.

§ 60.482-6a Standards: Open-ended valves or lines.

(a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482–1a(c) and paragraphs (d) and (e) of this section.

(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.

(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

(c) When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) of this section at all other times.

(d) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (a), (b), and (c) of this section.

(e) Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs (a) through (c) of this section are exempt from the requirements of paragraphs (a) through (c) of this section.

§ 60.482-7a Standards: Valves in gas/vapor service and in light liquid service.

(a)(1) Each valve shall be monitored monthly to detect leaks by the methods specified in §60.485a(b) and shall comply with paragraphs (b) through (e) of this section, except as provided in paragraphs (f), (g), and (h) of this section, §60.482–1a(c) and (f), and §§60.483–1a and 60.483–2a.

(2) A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be monitored according to paragraphs (a)(2)(i) or (ii), except for a valve that replaces a leaking valve and except as provided in paragraphs (f), (g), and (h) of this section, §60.482–1a(c), and §§60.483–1a and 60.483–2a.

(i) Monitor the valve as in paragraph (a)(1) of this section. The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation.

(ii) If the existing valves in the process unit are monitored in accordance with §60.483–1a or §60.483–2a, count the new valve as leaking when calculating the percentage of valves leaking as described in §60.483–2a(b)(5). If less than 2.0 percent of the valves are leaking for that process unit, the valve must be monitored for the first time during the next scheduled monitoring event for existing valves in the process unit or within 90 days, whichever comes first.

(b) If an instrument reading of 500 ppm or greater is measured, a leak is detected.

(c)(1)(i) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.

(ii) As an alternative to monitoring all of the valves in the first month of a quarter, an owner or operator may elect to subdivide the process unit into two or three subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every 3 months. The owner or operator must keep records of the valves assigned to each subgroup.

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

(d)(1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in §60.482–9a.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

(1) Tightening of bonnet bolts;

(2) Replacement of bonnet bolts;

(3) Tightening of packing gland nuts;

(4) Injection of lubricant into lubricated packing.

(f) Any valve that is designated, as described in §60.486a(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph (a) of this section if the valve:

(1) Has no external actuating mechanism in contact with the process fluid,

(2) Is operated with emissions less than 500 ppm above background as determined by the method specified in §60.485a(c), and

(3) Is tested for compliance with paragraph (f)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(g) Any valve that is designated, as described in §60.486a(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) of this section if:

(1) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section, and

(2) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

(h) Any valve that is designated, as described in §60.486a(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) of this section if:

(1) The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

(2) The process unit within which the valve is located either:

(i) Becomes an affected facility through §60.14 or §60.15 and was constructed on or before January 5, 1981; or

(ii) Has less than 3.0 percent of its total number of valves designated as difficult-to-monitor by the owner or operator.

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

§ 60.482-8a Standards: Pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service.

(a) If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service, the owner or operator shall follow either one of the following procedures:

(1) The owner or operator shall monitor the equipment within 5 days by the method specified in §60.485a(b) and shall comply with the requirements of paragraphs (b) through (d) of this section.

(2) The owner or operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak within 5 calendar days of detection.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482–9a.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) First attempts at repair include, but are not limited to, the best practices described under §§60.482–2a(c)(2) and 60.482–7a(e).

§ 60.482-9a Standards: Delay of repair.

(a) Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Monitoring to verify repair must occur within 15 days after startup of the process unit.

(b) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

(c) Delay of repair for valves and connectors will be allowed if:

(1) The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §60.482–10a.

(d) Delay of repair for pumps will be allowed if:

(1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and

(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(e) Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

(f) When delay of repair is allowed for a leaking pump, valve, or connector that remains in service, the pump, valve, or connector may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition.

§ 60.482-10a Standards: Closed vent systems and control devices.

(a) Owners or operators of closed vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section.

(b) Vapor recovery systems (for example, condensers and absorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume (ppmv), whichever is less stringent.

(c) Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 ppmv, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 °C.

(d) Flares used to comply with this subpart shall comply with the requirements of §60.18.

(e) Owners or operators of control devices used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.

(f) Except as provided in paragraphs (i) through (k) of this section, each closed vent system shall be inspected according to the procedures and schedule specified in paragraphs (f)(1) and (2) of this section.

(1) If the vapor collection system or closed vent system is constructed of hard-piping, the owner or operator shall comply with the requirements specified in paragraphs (f)(1)(i) and (ii) of this section:

(i) Conduct an initial inspection according to the procedures in §60.485a(b); and

(ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(2) If the vapor collection system or closed vent system is constructed of ductwork, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in §60.485a(b); and

(ii) Conduct annual inspections according to the procedures in §60.485a(b).

(g) Leaks, as indicated by an instrument reading greater than 500 ppmv above background or by visual inspections, shall be repaired as soon as practicable except as provided in paragraph (h) of this section.

(1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(2) Repair shall be completed no later than 15 calendar days after the leak is detected.

(h) Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.

(i) If a vapor collection system or closed vent system is operated under a vacuum, it is exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section.

(j) Any parts of the closed vent system that are designated, as described in paragraph (l)(1) of this section, as unsafe to inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section if they comply with the requirements specified in paragraphs (j)(1) and (2) of this section:

(1) The owner or operator determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraphs (f)(1)(i) or (f)(2) of this section; and

(2) The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

(k) Any parts of the closed vent system that are designated, as described in paragraph (l)(2) of this section, as difficult to inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section if they comply with the requirements specified in paragraphs (k)(1) through (3) of this section:

(1) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(2) The process unit within which the closed vent system is located becomes an affected facility through §§60.14 or 60.15, or the owner or operator designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and

(3) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years. A closed vent system is exempt from inspection if it is operated under a vacuum.

(l) The owner or operator shall record the information specified in paragraphs (l)(1) through (5) of this section.

(1) Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

(2) Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

(3) For each inspection during which a leak is detected, a record of the information specified in §60.486a(c).

(4) For each inspection conducted in accordance with §60.485a(b) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(5) For each visual inspection conducted in accordance with paragraph (f)(1)(ii) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(m) Closed vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

§ 60.482-11a Standards: Connectors in gas/vapor service and in light liquid service.

(a) The owner or operator shall initially monitor all connectors in the process unit for leaks by the later of either 12 months after the compliance date or 12 months after initial startup. If all connectors in the process unit have been monitored for leaks prior to the compliance date, no initial monitoring is required provided either no process changes have been made since the monitoring or the owner or operator can determine that the results of the monitoring, with or without adjustments, reliably demonstrate compliance despite process changes. If required to monitor because of a process change, the owner or operator is required to monitor only those connectors involved in the process change.

(b) Except as allowed in §60.482–1a(c), §60.482–10a, or as specified in paragraph (e) of this section, the owner or operator shall monitor all connectors in gas and vapor and light liquid service as specified in paragraphs (a) and (b)(3) of this section.

(1) The connectors shall be monitored to detect leaks by the method specified in §60.485a(b) and, as applicable, §60.485a(c).

(2) If an instrument reading greater than or equal to 500 ppm is measured, a leak is detected.

(3) The owner or operator shall perform monitoring, subsequent to the initial monitoring required in paragraph (a) of this section, as specified in paragraphs (b)(3)(i) through (iii) of this section, and shall comply with the requirements of paragraphs (b)(3)(iv) and (v) of this section. The required period in which monitoring must be conducted shall be determined from paragraphs (b)(3)(i) through (iii) of this section using the monitoring results from the preceding monitoring period. The percent leaking connectors shall be calculated as specified in paragraph (c) of this section.

(i) If the percent leaking connectors in the process unit was greater than or equal to 0.5 percent, then monitor within 12 months (1 year).

(ii) If the percent leaking connectors in the process unit was greater than or equal to 0.25 percent but less than 0.5 percent, then monitor within 4 years. An owner or operator may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors within 2 years of the start of the monitoring period, provided all connectors have been monitored by the end of the 4-year monitoring period.

(iii) If the percent leaking connectors in the process unit was less than 0.25 percent, then monitor as provided in paragraph (b)(3)(iii)(A) of this section and either paragraph (b)(3)(iii)(B) or (b)(3)(iii)(C) of this section, as appropriate.

(A) An owner or operator shall monitor at least 50 percent of the connectors within 4 years of the start of the monitoring period.

(B) If the percent of leaking connectors calculated from the monitoring results in paragraph (b)(3)(iii)(A) of this section is greater than or equal to 0.35 percent of the monitored connectors, the owner or operator shall monitor as soon as practical, but within the next 6 months, all connectors that have not yet been monitored during the monitoring period. At the conclusion of monitoring, a new monitoring period shall be started pursuant to paragraph (b)(3) of this section, based on the percent of leaking connectors within the total monitored connectors.

(C) If the percent of leaking connectors calculated from the monitoring results in paragraph (b)(3)(iii)(A) of this section is less than 0.35 percent of the monitored connectors, the owner or operator shall monitor all connectors that have not yet been monitored within 8 years of the start of the monitoring period.

(iv) If, during the monitoring conducted pursuant to paragraphs (b)(3)(i) through (iii) of this section, a connector is found to be leaking, it shall be re-monitored once within 90 days after repair to confirm that it is not leaking.

(v) The owner or operator shall keep a record of the start date and end date of each monitoring period under this section for each process unit.

(c) For use in determining the monitoring frequency, as specified in paragraphs (a) and (b)(3) of this section, the percent leaking connectors as used in paragraphs (a) and (b)(3) of this section shall be calculated by using the following equation:

$\%C_L = C_L / C_t * 100$

Where:

$\%C_L$= Percent of leaking connectors as determined through periodic monitoring required in paragraphs (a) and (b)(3)(i) through (iii) of this section.

C_L= Number of connectors measured at 500 ppm or greater, by the method specified in §60.485a(b).

C_t= Total number of monitored connectors in the process unit or affected facility.

(d) When a leak is detected pursuant to paragraphs (a) and (b) of this section, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482–9a. A first attempt at repair as defined in this subpart shall be made no later than 5 calendar days after the leak is detected.

(e) Any connector that is designated, as described in §60.486a(f)(1), as an unsafe-to-monitor connector is exempt from the requirements of paragraphs (a) and (b) of this section if:

(1) The owner or operator of the connector demonstrates that the connector is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraphs (a) and (b) of this section; and

(2) The owner or operator of the connector has a written plan that requires monitoring of the connector as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph (d) of this section if a leak is detected.

(f) *Inaccessible, ceramic, or ceramic-lined connectors* . (1) Any connector that is inaccessible or that is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined), is exempt from the monitoring requirements of paragraphs (a) and (b) of this section, from the leak repair requirements of paragraph (d) of this section, and from the recordkeeping and reporting requirements of §§63.1038 and 63.1039. An inaccessible connector is one that meets any of the provisions specified in paragraphs (f)(1)(i) through (vi) of this section, as applicable:

(i) Buried;

(ii) Insulated in a manner that prevents access to the connector by a monitor probe;

(iii) Obstructed by equipment or piping that prevents access to the connector by a monitor probe;

(iv) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold that would allow access to connectors up to 7.6 meters (25 feet) above the ground;

(v) Inaccessible because it would require elevating the monitoring personnel more than 2 meters (7 feet) above a permanent support surface or would require the erection of scaffold; or

(vi) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines, or would risk damage to equipment.

(2) If any inaccessible, ceramic, or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the visual, audible, olfactory, or other indications of a leak to the atmosphere shall be eliminated as soon as practical.

(g) Except for instrumentation systems and inaccessible, ceramic, or ceramic-lined connectors meeting the provisions of paragraph (f) of this section, identify the connectors subject to the requirements of this subpart. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this subpart are identified as a group, and the number of connectors subject is indicated.

Effective Date Note: At 73 FR 31376, June 2, 2008, §60.482–11a was stayed until further notice.

§ 60.483-1a Alternative standards for valves—allowable percentage of valves leaking.

(a) An owner or operator may elect to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent.

(b) The following requirements shall be met if an owner or operator wishes to comply with an allowable percentage of valves leaking:

(1) An owner or operator must notify the Administrator that the owner or operator has elected to comply with the allowable percentage of valves leaking before implementing this alternative standard, as specified in §60.487a(d).

(2) A performance test as specified in paragraph (c) of this section shall be conducted initially upon designation, annually, and at other times requested by the Administrator.

(3) If a valve leak is detected, it shall be repaired in accordance with §60.482–7a(d) and (e).

(c) Performance tests shall be conducted in the following manner:

(1) All valves in gas/vapor and light liquid service within the affected facility shall be monitored within 1 week by the methods specified in §60.485a(b).

(2) If an instrument reading of 500 ppm or greater is measured, a leak is detected.

(3) The leak percentage shall be determined by dividing the number of valves for which leaks are detected by the number of valves in gas/vapor and light liquid service within the affected facility.

(d) Owners and operators who elect to comply with this alternative standard shall not have an affected facility with a leak percentage greater than 2.0 percent, determined as described in §60.485a(h).

§ 60.483-2a Alternative standards for valves—skip period leak detection and repair.

(a)(1) An owner or operator may elect to comply with one of the alternative work practices specified in paragraphs (b)(2) and (3) of this section.

(2) An owner or operator must notify the Administrator before implementing one of the alternative work practices, as specified in §60.487(d)a.

(b)(1) An owner or operator shall comply initially with the requirements for valves in gas/vapor service and valves in light liquid service, as described in §60.482–7a.

(2) After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 1 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(3) After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 3 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(4) If the percent of valves leaking is greater than 2.0, the owner or operator shall comply with the requirements as described in §60.482–7a but can again elect to use this section.

(5) The percent of valves leaking shall be determined as described in §60.485a(h).

(6) An owner or operator must keep a record of the percent of valves found leaking during each leak detection period.

(7) A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for a process unit following one of the alternative standards in this section must be monitored in accordance with §60.482–7a(a)(2)(i) or (ii) before the provisions of this section can be applied to that valve.

§ 60.484a Equivalence of means of emission limitation.

(a) Each owner or operator subject to the provisions of this subpart may apply to the Administrator for determination of equivalence for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in this subpart.

(b) Determination of equivalence to the equipment, design, and operational requirements of this subpart will be evaluated by the following guidelines:

(1) Each owner or operator applying for an equivalence determination shall be responsible for collecting and verifying test data to demonstrate equivalence of means of emission limitation.

(2) The Administrator will compare test data for demonstrating equivalence of the means of emission limitation to test data for the equipment, design, and operational requirements.

(3) The Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the equipment, design, and operational requirements.

(c) Determination of equivalence to the required work practices in this subpart will be evaluated by the following guidelines:

(1) Each owner or operator applying for a determination of equivalence shall be responsible for collecting and verifying test data to demonstrate equivalence of an equivalent means of emission limitation.

(2) For each affected facility for which a determination of equivalence is requested, the emission reduction achieved by the required work practice shall be demonstrated.

(3) For each affected facility, for which a determination of equivalence is requested, the emission reduction achieved by the equivalent means of emission limitation shall be demonstrated.

(4) Each owner or operator applying for a determination of equivalence shall commit in writing to work practice(s) that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practice.

(5) The Administrator will compare the demonstrated emission reduction for the equivalent means of emission limitation to the demonstrated emission reduction for the required work practices and will consider the commitment in paragraph (c)(4) of this section.

(6) The Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the required work practice.

(d) An owner or operator may offer a unique approach to demonstrate the equivalence of any equivalent means of emission limitation.

(e)(1) After a request for determination of equivalence is received, the Administrator will publish a notice in the Federal Register and provide the opportunity for public hearing if the Administrator judges that the request may be approved.

(2) After notice and opportunity for public hearing, the Administrator will determine the equivalence of a means of emission limitation and will publish the determination in the Federal Register.

(3) Any equivalent means of emission limitations approved under this section shall constitute a required work practice, equipment, design, or operational standard within the meaning of section 111(h)(1) of the CAA.

(f)(1) Manufacturers of equipment used to control equipment leaks of VOC may apply to the Administrator for determination of equivalence for any equivalent means of emission limitation that achieves a reduction in emissions of VOC achieved by the equipment, design, and operational requirements of this subpart.

(2) The Administrator will make an equivalence determination according to the provisions of paragraphs (b), (c), (d), and (e) of this section.

§ 60.485a Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).

(b) The owner or operator shall determine compliance with the standards in §§60.482–1a through 60.482–11a, 60.483a, and 60.484a as follows:

(1) Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 of appendix A–7 of this part. The following calibration gases shall be used:

(i) Zero air (less than 10 ppm of hydrocarbon in air); and

(ii) A mixture of methane or n-hexane and air at a concentration no more than 2,000 ppm greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 ppm above the concentration specified as a leak, and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 ppm. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.

(2) A calibration drift assessment shall be performed, at a minimum, at the end of each monitoring day. Check the instrument using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 of appendix A–7 of this part, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. Record the instrument reading for each scale used as specified in §60.486a(e)(7). Calculate the average algebraic difference between the three meter readings and the most recent calibration value. Divide this algebraic difference by the initial calibration value and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift of more than 10 percent from the initial calibration value, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100) must be re-monitored. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at the owner/operator's discretion, all equipment since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by (100 plus the percent of positive drift/divided by 100) may be re-monitored.

(c) The owner or operator shall determine compliance with the no-detectable-emission standards in §§60.482–2a(e), 60.482–3a(i), 60.482–4a, 60.482–7a(f), and 60.482–10a(e) as follows:

(1) The requirements of paragraph (b) shall apply.

(2) Method 21 of appendix A–7 of this part shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(d) The owner or operator shall test each piece of equipment unless he demonstrates that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures shall be used:

(1) Procedures that conform to the general methods in ASTM E260–73, 91, or 96, E168–67, 77, or 92, E169–63, 77, or 93 (incorporated by reference—see §60.17) shall be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment.

(2) Organic compounds that are considered by the Administrator to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid.

(3) Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If the Administrator disagrees with the judgment, paragraphs (d)(1) and (2) of this section shall be used to resolve the disagreement.

(e) The owner or operator shall demonstrate that a piece of equipment is in light liquid service by showing that all the following conditions apply:

(1) The vapor pressure of one or more of the organic components is greater than 0.3 kPa at 20 °C (1.2 in. H_2O at 68 °F). Standard reference texts or ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17) shall be used to determine the vapor pressures.

(2) The total concentration of the pure organic components having a vapor pressure greater than 0.3 kPa at 20 °C (1.2 in. H_2O at 68 °F) is equal to or greater than 20 percent by weight.

(3) The fluid is a liquid at operating conditions.

(f) Samples used in conjunction with paragraphs (d), (e), and (g) of this section shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.

(g) The owner or operator shall determine compliance with the standards of flares as follows:

(1) Method 22 of appendix A–7 of this part shall be used to determine visible emissions.

(2) A thermocouple or any other equivalent device shall be used to monitor the presence of a pilot flame in the flare.

(3) The maximum permitted velocity for air assisted flares shall be computed using the following equation:

$V_{max} = K_1 + K_2 H_T$

Where:

V_{max}= Maximum permitted velocity, m/sec (ft/sec).

H_T= Net heating value of the gas being combusted, MJ/scm (Btu/scf).

K_1= 8.706 m/sec (metric units) = 28.56 ft/sec (English units).

K_2= 0.7084 m^4 /(MJ-sec) (metric units) = 0.087 ft^4 /(Btu-sec) (English units).

(4) The net heating value (HT) of the gas being combusted in a flare shall be computed using the following equation:

$$H_T = K \sum_{i=1}^{n} C_i H_i$$

Where:

K = Conversion constant, 1.740 × 10^{-7} (g-mole)(MJ)/(ppm-scm-kcal) (metric units) = 4.674 × 10^{-6} [(g-mole)(Btu)/(ppm-scf-kcal)] (English units).

C_i= Concentration of sample component "i," ppm

H_i= net heat of combustion of sample component "i" at 25 °C and 760 mm Hg (77 °F and 14.7 psi), kcal/g-mole.

(5) Method 18 of appendix A–6 of this part or ASTM D6420–99 (2004) (where the target compound(s) are those listed in Section 1.1 of ASTM D6420–99, and the target concentration is between 150 parts per billion by volume and 100 ppmv) and ASTM D2504–67, 77, or 88 (Reapproved 1993) (incorporated by reference-see §60.17) shall be used to determine the concentration of sample component "i."

(6) ASTM D2382–76 or 88 or D4809–95 (incorporated by reference-see §60.17) shall be used to determine the net heat of combustion of component "i" if published values are not available or cannot be calculated.

(7) Method 2, 2A, 2C, or 2D of appendix A–7 of this part, as appropriate, shall be used to determine the actual exit velocity of a flare. If needed, the unobstructed (free) cross-sectional area of the flare tip shall be used.

(h) The owner or operator shall determine compliance with §60.483–1a or §60.483–2a as follows:

(1) The percent of valves leaking shall be determined using the following equation:

$\%V_L = (V_L / V_T) * 100$

Where:

$\%V_L$= Percent leaking valves.

V_L= Number of valves found leaking.

V_T= The sum of the total number of valves monitored.

(2) The total number of valves monitored shall include difficult-to-monitor and unsafe-to-monitor valves only during the monitoring period in which those valves are monitored.

(3) The number of valves leaking shall include valves for which repair has been delayed.

(4) Any new valve that is not monitored within 30 days of being placed in service shall be included in the number of valves leaking and the total number of valves monitored for the monitoring period in which the valve is placed in service.

(5) If the process unit has been subdivided in accordance with §60.482–7a(c)(1)(ii), the sum of valves found leaking during a monitoring period includes all subgroups.

(6) The total number of valves monitored does not include a valve monitored to verify repair.

§ 60.486a Recordkeeping requirements.

(a)(1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.

(2) An owner or operator of more than one affected facility subject to the provisions of this subpart may comply with the recordkeeping requirements for these facilities in one recordkeeping system if the system identifies each record by each facility.

(3) The owner or operator shall record the information specified in paragraphs (a)(3)(i) through (v) of this section for each monitoring event required by §§60.482–2a, 60.482–3a, 60.482–7a, 60.482–8a, 60.482–11a, and 60.483–2a.

(i) Monitoring instrument identification.

(ii) Operator identification.

(iii) Equipment identification.

(iv) Date of monitoring.

(v) Instrument reading.

(b) When each leak is detected as specified in §§60.482–2a, 60.482–3a, 60.482–7a, 60.482–8a, 60.482–11a, and 60.483–2a, the following requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in §60.482–7a(c) and no leak has been detected during those 2 months.

(3) The identification on a connector may be removed after it has been monitored as specified in §60.482–11a(b)(3)(iv) and no leak has been detected during that monitoring.

(4) The identification on equipment, except on a valve or connector, may be removed after it has been repaired.

(c) When each leak is detected as specified in §§60.482–2a, 60.482–3a, 60.482–7a, 60.482–8a, 60.482–11a, and 60.483–2a, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:

(1) The instrument and operator identification numbers and the equipment identification number, except when indications of liquids dripping from a pump are designated as a leak.

(2) The date the leak was detected and the dates of each attempt to repair the leak.

(3) Repair methods applied in each attempt to repair the leak.

(4) Maximum instrument reading measured by Method 21 of appendix A–7 of this part at the time the leak is successfully repaired or determined to be nonrepairable, except when a pump is repaired by eliminating indications of liquids dripping.

(5) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(6) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.

(7) The expected date of successful repair of the leak if a leak is not repaired within 15 days.

(8) Dates of process unit shutdowns that occur while the equipment is unrepaired.

(9) The date of successful repair of the leak.

(d) The following information pertaining to the design requirements for closed vent systems and control devices described in §60.482–10a shall be recorded and kept in a readily accessible location:

(1) Detailed schematics, design specifications, and piping and instrumentation diagrams.

(2) The dates and descriptions of any changes in the design specifications.

(3) A description of the parameter or parameters monitored, as required in §60.482–10a(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(4) Periods when the closed vent systems and control devices required in §§60.482–2a, 60.482–3a, 60.482–4a, and 60.482–5a are not operated as designed, including periods when a flare pilot light does not have a flame.

(5) Dates of startups and shutdowns of the closed vent systems and control devices required in §§60.482–2a, 60.482–3a, 60.482–4a, and 60.482–5a.

(e) The following information pertaining to all equipment subject to the requirements in §§60.482–1a to 60.482–11a shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for equipment subject to the requirements of this subpart.

(2)(i) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §§60.482–2a(e), 60.482–3a(i), and 60.482–7a(f).

(ii) The designation of equipment as subject to the requirements of §60.482–2a(e), §60.482–3a(i), or §60.482–7a(f) shall be signed by the owner or operator. Alternatively, the owner or operator may establish a mechanism with their permitting authority that satisfies this requirement.

(3) A list of equipment identification numbers for pressure relief devices required to comply with §60.482–4a.

(4)(i) The dates of each compliance test as required in §§60.482–2a(e), 60.482–3a(i), 60.482–4a, and 60.482–7a(f).

(ii) The background level measured during each compliance test.

(iii) The maximum instrument reading measured at the equipment during each compliance test.

(5) A list of identification numbers for equipment in vacuum service.

(6) A list of identification numbers for equipment that the owner or operator designates as operating in VOC service less than 300 hr/yr in accordance with §60.482–1a(e), a description of the conditions under which the equipment is in VOC service, and rationale supporting the designation that it is in VOC service less than 300 hr/yr.

(7) The date and results of the weekly visual inspection for indications of liquids dripping from pumps in light liquid service.

(8) Records of the information specified in paragraphs (e)(8)(i) through (vi) of this section for monitoring instrument calibrations conducted according to sections 8.1.2 and 10 of Method 21 of appendix A–7 of this part and §60.485a(b).

(i) Date of calibration and initials of operator performing the calibration.

(ii) Calibration gas cylinder identification, certification date, and certified concentration.

(iii) Instrument scale(s) used.

(iv) A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value in accordance with section 10.1 of Method 21 of appendix A–7 of this part.

(v) Results of each calibration drift assessment required by §60.485a(b)(2) (i.e., instrument reading for calibration at end of monitoring day and the calculated percent difference from the initial calibration value).

(vi) If an owner or operator makes their own calibration gas, a description of the procedure used.

(9) The connector monitoring schedule for each process unit as specified in §60.482–11a(b)(3)(v).

(10) Records of each release from a pressure relief device subject to §60.482–4a.

(f) The following information pertaining to all valves subject to the requirements of §60.482–7a(g) and (h), all pumps subject to the requirements of §60.482–2a(g), and all connectors subject to the requirements of §60.482–11a(e) shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for valves, pumps, and connectors that are designated as unsafe-to-monitor, an explanation for each valve, pump, or connector stating why the valve, pump, or connector is unsafe-to-monitor, and the plan for monitoring each valve, pump, or connector.

(2) A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.

(g) The following information shall be recorded for valves complying with §60.483–2a:

(1) A schedule of monitoring.

(2) The percent of valves found leaking during each monitoring period.

(h) The following information shall be recorded in a log that is kept in a readily accessible location:

(1) Design criterion required in §§60.482–2a(d)(5) and 60.482–3a(e)(2) and explanation of the design criterion; and

(2) Any changes to this criterion and the reasons for the changes.

(i) The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in §60.480a(d):

(1) An analysis demonstrating the design capacity of the affected facility,

(2) A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol, and

(3) An analysis demonstrating that equipment is not in VOC service.

(j) Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.

(k) The provisions of §60.7(b) and (d) do not apply to affected facilities subject to this subpart.

§ 60.487a Reporting requirements.

(a) Each owner or operator subject to the provisions of this subpart shall submit semiannual reports to the Administrator beginning 6 months after the initial startup date.

(b) The initial semiannual report to the Administrator shall include the following information:

(1) Process unit identification.

(2) Number of valves subject to the requirements of §60.482–7a, excluding those valves designated for no detectable emissions under the provisions of §60.482–7a(f).

(3) Number of pumps subject to the requirements of §60.482–2a, excluding those pumps designated for no detectable emissions under the provisions of §60.482–2a(e) and those pumps complying with §60.482–2a(f).

(4) Number of compressors subject to the requirements of §60.482–3a, excluding those compressors designated for no detectable emissions under the provisions of §60.482–3a(i) and those compressors complying with §60.482–3a(h).

(5) Number of connectors subject to the requirements of §60.482–11a.

(c) All semiannual reports to the Administrator shall include the following information, summarized from the information in §60.486a:

(1) Process unit identification.

(2) For each month during the semiannual reporting period,

(i) Number of valves for which leaks were detected as described in §60.482–7a(b) or §60.483–2a,

(ii) Number of valves for which leaks were not repaired as required in §60.482–7a(d)(1),

(iii) Number of pumps for which leaks were detected as described in §60.482–2a(b), (d)(4)(ii)(A) or (B), or (d)(5)(iii),

(iv) Number of pumps for which leaks were not repaired as required in §60.482–2a(c)(1) and (d)(6),

(v) Number of compressors for which leaks were detected as described in §60.482–3a(f),

(vi) Number of compressors for which leaks were not repaired as required in §60.482–3a(g)(1),

(vii) Number of connectors for which leaks were detected as described in §60.482–11a(b)

(viii) Number of connectors for which leaks were not repaired as required in §60.482–11a(d), and

(ix)–(x) [Reserved]

(xi) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.

(3) Dates of process unit shutdowns which occurred within the semiannual reporting period.

(4) Revisions to items reported according to paragraph (b) of this section if changes have occurred since the initial report or subsequent revisions to the initial report.

(d) An owner or operator electing to comply with the provisions of §§60.483–1a or 60.483–2a shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions.

(e) An owner or operator shall report the results of all performance tests in accordance with §60.8 of the General Provisions. The provisions of §60.8(d) do not apply to affected facilities subject to the provisions of this subpart except that an owner or operator must notify the Administrator of the schedule for the initial performance tests at least 30 days before the initial performance tests.

(f) The requirements of paragraphs (a) through (c) of this section remain in force until and unless EPA, in delegating enforcement authority to a state under section 111(c) of the CAA, approves reporting requirements or an alternative means of compliance surveillance adopted by such state. In that event, affected sources within the state will be relieved of the obligation to comply with the requirements of paragraphs (a) through (c) of this section, provided that they comply with the requirements established by the state.

§ 60.488a Reconstruction.

For the purposes of this subpart:

(a) The cost of the following frequently replaced components of the facility shall not be considered in calculating either the “fixed capital cost of the new components” or the “fixed capital costs that would be required to construct a comparable new facility” under §60.15: Pump seals, nuts and bolts, rupture disks, and packings.

(b) Under §60.15, the “fixed capital cost of new components” includes the fixed capital cost of all depreciable components (except components specified in §60.488a(a)) which are or will be replaced pursuant to all continuous programs of component replacement which are commenced within any 2-year period following the applicability date for the appropriate subpart. (See the “Applicability and designation of affected facility” section of

the appropriate subpart.) For purposes of this paragraph, “commenced” means that an owner or operator has undertaken a continuous program of component replacement or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of component replacement.

§ 60.489a List of chemicals produced by affected facilities.

Process units that produce, as intermediates or final products, chemicals listed in §60.489 are covered under this subpart. The applicability date for process units producing one or more of these chemicals is November 8, 2006.

Indiana Department of Environmental Management
Office of Air Quality

Attachment D

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart Kb—Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984

Source: 52 FR 11429, Apr. 8, 1987, unless otherwise noted.

§ 60.110b Applicability and designation of affected facility.

(a) Except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

(b) This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure less than 15.0 kPa.

(c) [Reserved]

(d) This subpart does not apply to the following:

(1) Vessels at coke oven by-product plants.

(2) Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere.

(3) Vessels permanently attached to mobile vehicles such as trucks, railcars, barges, or ships.

(4) Vessels with a design capacity less than or equal to 1,589.874 m^3 used for petroleum or condensate stored, processed, or treated prior to custody transfer.

(5) Vessels located at bulk gasoline plants.

(6) Storage vessels located at gasoline service stations.

(7) Vessels used to store beverage alcohol.

(8) Vessels subject to subpart GGGG of 40 CFR part 63.

(e) *Alternative means of compliance* —(1) *Option to comply with part 65.* Owners or operators may choose to comply with 40 CFR part 65, subpart C, to satisfy the requirements of §§60.112b through 60.117b for storage vessels that are subject to this subpart that meet the specifications in paragraphs (e)(1)(i) and (ii) of this section. When choosing to comply with 40 CFR part 65, subpart C, the monitoring requirements of §60.116b(c), (e), (f)(1), and (g) still apply. Other provisions applying to owners or operators who choose to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(i) A storage vessel with a design capacity greater than or equal to 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa; or

(ii) A storage vessel with a design capacity greater than 75 m^3 but less than 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa.

(2) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 65, subpart C, must also comply with §§60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for those storage vessels. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(2) do not apply to owners or operators of storage vessels complying with 40 CFR part 65, subpart C, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart C, must comply with 40 CFR part 65, subpart A.

(3) *Internal floating roof report.* If an owner or operator installs an internal floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.43. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

(4) *External floating roof report.* If an owner or operator installs an external floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.44. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 78275, Dec. 14, 2000; 68 FR 59332, Oct. 15, 2003]

§ 60.111b Definitions.

Terms used in this subpart are defined in the Act, in subpart A of this part, or in this subpart as follows:

Bulk gasoline plant means any gasoline distribution facility that has a gasoline throughput less than or equal to 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal requirement or Federal, State or local law, and discoverable by the Administrator and any other person.

Condensate means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions.

Custody transfer means the transfer of produced petroleum and/or condensate, after processing and/or treatment in the producing operations, from storage vessels or automatic transfer facilities to pipelines or any other forms of transportation.

Fill means the introduction of VOL into a storage vessel but not necessarily to complete capacity.

Gasoline service station means any site where gasoline is dispensed to motor vehicle fuel tanks from stationary storage tanks.

Maximum true vapor pressure means the equilibrium partial pressure exerted by the volatile organic compounds (as defined in 40 CFR 51.100) in the stored VOL at the temperature equal to the highest calendar-month average of the VOL storage temperature for VOL's stored above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for VOL's stored at the ambient temperature, as determined:

(1) In accordance with methods described in American Petroleum institute Bulletin 2517, Evaporation Loss From External Floating Roof Tanks, (incorporated by reference—see §60.17); or

(2) As obtained from standard reference texts; or

(3) As determined by ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17);

(4) Any other method approved by the Administrator.

Petroleum means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.

Petroleum liquids means petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery.

Process tank means a tank that is used within a process (including a solvent or raw material recovery process) to collect material discharged from a feedstock storage vessel or equipment within the process before the material is transferred to other equipment within the process, to a product or by-product storage vessel, or to a vessel used to store recovered solvent or raw material. In many process tanks, unit operations such as reactions and blending are conducted. Other process tanks, such as surge control vessels and bottoms receivers, however, may not involve unit operations.

Reid vapor pressure means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids except liquified petroleum gases, as determined by ASTM D323–82 or 94 (incorporated by reference—see §60.17).

Storage vessel means each tank, reservoir, or container used for the storage of volatile organic liquids but does not include:

(1) Frames, housing, auxiliary supports, or other components that are not directly involved in the containment of liquids or vapors;

(2) Subsurface caverns or porous rock reservoirs; or

(3) Process tanks.

Volatile organic liquid (VOL) means any organic liquid which can emit volatile organic compounds (as defined in 40 CFR 51.100) into the atmosphere.

Waste means any liquid resulting from industrial, commercial, mining or agricultural operations, or from community activities that is discarded or is being accumulated, stored, or physically, chemically, or biologically treated prior to being discarded or recycled.

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 61756, Oct. 17, 2000; 68 FR 59333, Oct. 15, 2003]

§ 60.112b Standard for volatile organic compounds (VOC).

(a) The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:

(1) A fixed roof in combination with an internal floating roof meeting the following specifications:

(i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely

emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

(ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:

(A) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

(B) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.

(C) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

(iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

(v) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.

(vi) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.

(vii) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

(viii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(2) An external floating roof. An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Each external floating roof must meet the following specifications:

(i) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in §60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.

(B) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in §60.113b(b)(4).

(ii) Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(iii) The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

(3) A closed vent system and control device meeting the following specifications:

(i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, §60.485(b).

(ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§60.18) of the General Provisions.

(4) A system equivalent to those described in paragraphs (a)(1), (a)(2), or (a)(3) of this section as provided in §60.114b of this subpart.

(b) The owner or operator of each storage vessel with a design capacity greater than or equal to 75 m^3 which contains a VOL that, as stored, has a maximum true vapor pressure greater than or equal to 76.6 kPa shall equip each storage vessel with one of the following:

(1) A closed vent system and control device as specified in §60.112b(a)(3).

(2) A system equivalent to that described in paragraph (b)(1) as provided in §60.114b of this subpart.

(c) *Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia.* This paragraph applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia (“site”).

(1) For any storage vessel that otherwise would be subject to the control technology requirements of paragraphs (a) or (b) of this section, the site shall have the option of either complying directly with the requirements of this subpart, or reducing the site-wide total criteria pollutant emissions cap (total emissions cap) in accordance with the procedures set forth in a permit issued pursuant to 40 CFR 52.2454. If the site chooses the option of reducing the total emissions cap in accordance with the procedures set forth in such permit, the requirements of such permit shall apply in lieu of the otherwise applicable requirements of this subpart for such storage vessel.

(2) For any storage vessel at the site not subject to the requirements of 40 CFR 60.112b (a) or (b), the requirements of 40 CFR 60.116b (b) and (c) and the General Provisions (subpart A of this part) shall not apply.

[52 FR 11429, Apr. 8, 1987, as amended at 62 FR 52641, Oct. 8, 1997]

§ 60.113b Testing and procedures.

The owner or operator of each storage vessel as specified in §60.112b(a) shall meet the requirements of paragraph (a), (b), or (c) of this section. The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of §60.112b.

(a) After installing the control equipment required to meet §60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall:

(1) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.

(2) For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in §60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(3) For vessels equipped with a double-seal system as specified in §60.112b(a)(1)(ii)(B):

(i) Visually inspect the vessel as specified in paragraph (a)(4) of this section at least every 5 years; or

(ii) Visually inspect the vessel as specified in paragraph (a)(2) of this section.

(4) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in paragraphs (a)(2) and (a)(3)(ii) of this section and at intervals no greater than 5 years in the case of vessels specified in paragraph (a)(3)(i) of this section.

(5) Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs (a)(1) and (a)(4) of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by paragraph (a)(4) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(b) After installing the control equipment required to meet §60.112b(a)(2) (external floating roof), the owner or operator shall:

(1) Determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the following frequency.

(i) Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.

(ii) Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.

(iii) If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for the purposes of paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(2) Determine gap widths and areas in the primary and secondary seals individually by the following procedures:

(i) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.

(ii) Measure seal gaps around the entire circumference of the tank in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location.

(iii) The total surface area of each gap described in paragraph (b)(2)(ii) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(3) Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in paragraph (b)(4) of this section.

(4) Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in (b)(4) (i) and (ii) of this section:

(i) The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 Cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.

(A) One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface.

(B) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

(ii) The secondary seal is to meet the following requirements:

(A) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section.

(B) The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.

(C) There are to be no holes, tears, or other openings in the seal or seal fabric.

(iii) If a failure that is detected during inspections required in paragraph (b)(1) of §60.113b(b) cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in §60.115b(b)(4). Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(5) Notify the Administrator 30 days in advance of any gap measurements required by paragraph (b)(1) of this section to afford the Administrator the opportunity to have an observer present.

(6) Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

(i) If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.

(ii) For all the inspections required by paragraph (b)(6) of this section, the owner or operator shall notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the Administrator the opportunity to inspect the storage vessel prior to refilling. If the inspection required by paragraph (b)(6) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(c) The owner or operator of each source that is equipped with a closed vent system and control device as required in §60.112b (a)(3) or (b)(2) (other than a flare) is exempt from §60.8 of the General Provisions and shall meet the following requirements.

(1) Submit for approval by the Administrator as an attachment to the notification required by §60.7(a)(1) or, if the facility is exempt from §60.7(a)(1), as an attachment to the notification required by §60.7(a)(2), an operating plan containing the information listed below.

(i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

(ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (c)(1) of this section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.

(d) The owner or operator of each source that is equipped with a closed vent system and a flare to meet the requirements in §60.112b (a)(3) or (b)(2) shall meet the requirements as specified in the general control device requirements, §60.18 (e) and (f).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989]

§ 60.114b Alternative means of emission limitation.

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in emissions at least equivalent to the reduction in emissions achieved by any requirement in §60.112b, the Administrator will publish in the Federal Register a notice permitting the use of the alternative means for purposes of compliance with that requirement.

(b) Any notice under paragraph (a) of this section will be published only after notice and an opportunity for a hearing.

(c) Any person seeking permission under this section shall submit to the Administrator a written application including:

(1) An actual emissions test that uses a full-sized or scale-model storage vessel that accurately collects and measures all VOC emissions from a given control device and that accurately simulates wind and accounts for other emission variables such as temperature and barometric pressure.

(2) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.

(d) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emissions reduction as specified in §60.112b.

§ 60.115b Reporting and recordkeeping requirements.

The owner or operator of each storage vessel as specified in §60.112b(a) shall keep records and furnish reports as required by paragraphs (a), (b), or (c) of this section depending upon the control equipment installed to meet the requirements of §60.112b. The owner or operator shall keep copies of all reports and records required by this section, except for the record required by (c)(1), for at least 2 years. The record required by (c)(1) will be kept for the life of the control equipment.

(a) After installing control equipment in accordance with §60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of §60.112b(a)(1) and §60.113b(a)(1). This report shall be an attachment to the notification required by §60.7(a)(3).

(2) Keep a record of each inspection performed as required by §60.113b (a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

(3) If any of the conditions described in §60.113b(a)(2) are detected during the annual visual inspection required by §60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

(4) After each inspection required by §60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in §60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of §61.112b(a)(1) or §60.113b(a)(3) and list each repair made.

(b) After installing control equipment in accordance with §61.112b(a)(2) (external floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of §60.112b(a)(2) and §60.113b(b)(2), (b)(3), and (b)(4). This report shall be an attachment to the notification required by §60.7(a)(3).

(2) Within 60 days of performing the seal gap measurements required by §60.113b(b)(1), furnish the Administrator with a report that contains:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in §60.113b (b)(2) and (b)(3).

(3) Keep a record of each gap measurement performed as required by §60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in §60.113b (b)(2) and (b)(3).

(4) After each seal gap measurement that detects gaps exceeding the limitations specified by §60.113b(b)(4), submit a report to the Administrator within 30 days of the inspection. The report will identify the vessel and contain the information specified in paragraph (b)(2) of this section and the date the vessel was emptied or the repairs made and date of repair.

(c) After installing control equipment in accordance with §60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records.

(1) A copy of the operating plan.

(2) A record of the measured values of the parameters monitored in accordance with §60.113b(c)(2).

(d) After installing a closed vent system and flare to comply with §60.112b, the owner or operator shall meet the following requirements.

(1) A report containing the measurements required by §60.18(f) (1), (2), (3), (4), (5), and (6) shall be furnished to the Administrator as required by §60.8 of the General Provisions. This report shall be submitted within 6 months of the initial start-up date.

(2) Records shall be kept of all periods of operation during which the flare pilot flame is absent.

(3) Semiannual reports of all periods recorded under §60.115b(d)(2) in which the pilot flame was absent shall be furnished to the Administrator.

§ 60.116b Monitoring of operations.

(a) The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source.

(b) The owner or operator of each storage vessel as specified in §60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

(c) Except as provided in paragraphs (f) and (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

(d) Except as provided in paragraph (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor vapor pressure values for each volume range.

(e) Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below.

(1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

(2) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:

(i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference—see §60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

(ii) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

(3) For other liquids, the vapor pressure:

(i) May be obtained from standard reference texts, or

(ii) Determined by ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17); or

(iii) Measured by an appropriate method approved by the Administrator; or

(iv) Calculated by an appropriate method approved by the Administrator.

(f) The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.

(1) Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph (e) of this section.

(2) For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in §60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:

(i) ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17); or

(ii) ASTM D323–82 or 94 (incorporated by reference—see §60.17); or

(iii) As measured by an appropriate method as approved by the Administrator.

(g) The owner or operator of each vessel equipped with a closed vent system and control device meeting the specification of §60.112b or with emissions reductions equipment as specified in 40 CFR 65.42(b)(4), (b)(5), (b)(6), or (c) is exempt from the requirements of paragraphs (c) and (d) of this section.

[52 FR 11429, Apr. 8, 1987, as amended at 65 FR 61756, Oct. 17, 2000; 65 FR 78276, Dec. 14, 2000; 68 FR 59333, Oct. 15, 2003]

§ 60.117b Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: §§60.111b(f)(4), 60.114b, 60.116b(e)(3)(iii), 60.116b(e)(3)(iv), and 60.116b(f)(2)(iii).

[52 FR 11429, Apr. 8, 1987, as amended at 52 FR 22780, June 16, 1987]

Indiana Department of Environmental Management
Office of Air Quality

Attachment E

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 Sec. 63.6675, which includes operating according to the provisions specified in Sec. 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 Sec. 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in Sec. 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 Sec. 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in Sec. 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 Sec. 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in Sec. 63.6640(f)(4)(ii).

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008]

§ 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 Sec. 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 Sec. 63.6640(f)(2)(ii) and (iii).

(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]

§ 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]

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 Sec. 63.6620 and Table 4 to this subpart.

[75 FR 51589, Aug. 20, 2010]

§ 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 Sec. 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 Sec. 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 Sec. 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 Sec. 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 Sec. 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 Sec. 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]

§ 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 Sec. 63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in Sec. 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 Sec. 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 Sec. 63.6603(b)(1) or Sec. 63.6603(b)(2), or are on offshore vessels that meet Sec. 63.6603(c) are exempt from the requirements of this section.

[75 FR 51589, Aug. 20, 2010]

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]

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 Sec. 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:

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 1)}$$

Where:

C_i = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

C_o = concentration of CO, THC, or formaldehyde at the control device outlet, and

R = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO2 concentration is measured in lieu of oxygen concentration measurement, a CO2 correction factor is needed. Calculate the CO2 correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

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

$$F_o = \frac{0.209\, F_d}{F_c} \qquad \text{(Eq. 2)}$$

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, dsm^3 /J (dscf/10^6 Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$X_{co_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 3)}$$

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 O2 using CO2 as follows:
follows:

$$C_{adj} = C_d \frac{X_{CO2}}{\%CO_2} \qquad (Eq.4)$$

Where:

Cadj = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O2.
Cd = Measured concentration of CO, THC, or formaldehyde, uncorrected.
XCO2 = CO2 correction factor, percent.
%CO2 = Measured CO2 concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

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

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.,* operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.,* wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010]

§ 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O2 or CO2 according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in § 63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in § 63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in § 63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_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.

(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 Sec. 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 Sec. 63.6603(b)(1) or Sec. 63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet Sec. 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]

§ 63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.6645.

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

(e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least three test runs.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O2 using one of the O2 measurement methods specified in Table 4 of this subpart. Measurements to determine O2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O2 emissions simultaneously at the inlet and outlet of the control device.

Continuous Compliance Requirements

§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

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

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in § 63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured

during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O2 using one of the O2 measurement methods specified in Table 4 of this subpart. Measurements to determine O2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O2 emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat

input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see Sec. 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]

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 Sec. 63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in Sec. 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]

§ 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 Sec. 63.6640(f)(2)(ii) and (iii) or that operates for the purpose

specified in Sec. 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 Sec. 63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in Sec. 63.6640(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in Sec. 63.6640(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purpose specified in Sec. 63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in Sec. 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 Sec. 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 Sec. 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 Sec. 63.13.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010]

§ 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 Sec. 63.6640(f)(2)(ii) or (iii) or Sec. 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]

§ 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 Sec. 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 Sec. 63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in Sec. 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 Sec. 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 Sec. 63.6640(f)(2)(ii) or (iii) and Sec. 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 $C_3 H_8$.

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]

Table 1 a **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 1 b **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 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 O2 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 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.
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 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 O2 and not using NSCR.	Comply with any operating limitations approved by the Administrator.

\1\ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[76 FR 12867, Mar. 9, 2011]

Table 2 a **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 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	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]

	percent O_2until June 15, 2007	
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	
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 2 b **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; 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 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 >500HP 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 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 [deg]F and less than or equal to 1350^{o}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 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 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.	Comply with any operating limitations approved by the Administrator.

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[75 FR 51593, Aug. 20, 2010, as amended at 76 FR 12867, Mar. 9, 2011]

Table 2 c **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, during periods of startup . . .	During periods of except 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	Minimize the engine's time spent at idle and minimize the engine's startup

	first.\2\ b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;. c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.\3\.	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\ b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;. c. Inspect all hoses and belts every 500	

For each . . .	You must meet the following requirement, during periods of startup . . .	During periods of except startup you must . . .
	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 O2.	
4. Non-Emergency, non-black start CI stationary RICE 300>HP<=500.	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O2; or b. Reduce CO emissions by 70 percent or more..	
5. Non-Emergency, non-black start stationary CI RICE >500 HP.	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O2; or b. Reduce CO emissions by 70 percent or more..	
6. Emergency stationary SI RICE and black start stationary SI RICE.\1\	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;\2\ b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;. c. Inspect all hoses and belts every 500	

hours of operation or annually, whichever comes first, and replace

For each . . .	You must meet the following requirement, during periods of startup . . .	During periods of startup you must except . . .
	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\ 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\ 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\	
9. Non-emergency, non-black	Limit concentration	

start 2SLB stationary RICE 100<=HP<=500.	of CO in the stationary RICE exhaust to 225 ppmvd or less at 15

For each . . .	You must meet the following requirement, during periods of startup . . .	During periods of except startup you must . . .
	percent O2.	
10. Non-emergency, non-black start 4SLB stationary RICE 100<=HP<=500.	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O2.	
11. Non-emergency, non-black start 4SRB stationary RICE 100<=HP<=500.	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O2.	
12. Non-emergency, non-black start stationary RICE 100<=HP<=500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O2.	

\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 Sec. 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.

[75 FR 51593, Aug. 20, 2010]

Table 2 d **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, during periods of startup . . .	During periods of except 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\ b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;. c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary..	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
2. Non-Emergency, non-black start CI stationary RICE 300<HP<=500.	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O2; or b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE >500 HP.	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O2; or b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE.\2\	a. Change oil and filter every 500 hours of operation or annually, whichever comes	

		first;\1\ b. Inspect air cleaner every 1,000 hours of operation

For each . . .	You must meet the following requirement, during periods of startup . . .	During periods of startup you must except . . .
	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.	
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

For each . . .	You must meet the following requirement, during periods of startup . . .	During periods of except startup you must . . .
	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 ilter 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.
9. Non-emergency, non-black start 4SLB stationary RICE	Install an oxidation catalyst to reduce

For each . . .	You must meet the following requirement, during periods of startup . . .	During periods of except startup you must . . .
>500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year.	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	Install NSCR to reduce HAP

For each . . .	You must meet the following requirement, during periods of startup . . .	During periods of startup you must . . . except
>500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year.	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\ 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.	

\1\ Sources have the option to utilize an oil analysis program as described in Sec. 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.

[75 FR 51595, Aug. 20, 2010]

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 with a brake horsepower 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 hrs. 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 no using a CEMS	Conduct subsequent performance tests every 8,760 hrs. 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.

[75 FR 51596, Aug. 20, 2010]

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

As stated in §§ 63.6610, 63.6611, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary	a. Reduce CO emissions	i. Measure the O_2at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00	(a) Measurements to determine O2 must be made at the same time as the

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
RICE			(Reapproved 2005).a c	measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device	(1) ASTM D6522–00 (Reapproved 2005) a b c or Method 10 of 40 CFR part 60, appendix A.	(a) The CO concentration must be at 15 percent O_2, dry basis.
2. 4SRB stationary RICE	a. Reduce formaldehyde emissions	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i).	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005).[a]	(a) Measurements to determine O_2concentration 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, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03	(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 formaldehyde 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.	(a) THC concentration must be at 15 percent O2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
3. Stationary RICE	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i)	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2concentration 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, or ASTM Method D6522-00 (Reapproved 2005)[a]	(a) Measurements to determine O_2concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03[a]	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03,[a] provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. Measure CO at the exhaust of the stationary RICE	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00 (2005),[a,c] Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03.[a]	(a) CO Concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour longer runs.

a Incorporated by reference, see 40 CFR 63.14. You may also obtain copies from University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

b You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03.

c ASTM–D6522–00 (2005) may be used to test both CI and SI stationary RICE. [75 FR 51597, Aug. 20, 2010]

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	a. Reduce CO emissions and using oxidation catalyst,	i. The average reduction of emissions of CO

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
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.	and using a CPMS.	determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in Sec. 63.6625(b); and 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 Sec. 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-	a. Reduce CO	i. The average

emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency	emissions and not using oxidation catalyst.	reduction of emissions of CO determined from the initial performance

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
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.		test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in Sec. 63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
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 ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in Sec. 63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
5. New or reconstructed non-	a. Reduce CO	i. You have

emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency	emissions, and using a CEMS.	installed a CEMS to continuously monitor CO and either O2 or CO2 at

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
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.		both the inlet and outlet of the oxidation catalyst according to the requirements in Sec. 63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and iii. The average reduction of CO calculated using Sec. 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 O2 or CO2 at the outlet of the oxidation catalyst according to the requirements in Sec. 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

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		iii. The average concentration of CO calculated using Sec. 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 ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in Sec. 63.6625(b); and

iii. You have recorded the catalyst pressure drop and catalyst

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		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 Sec. 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	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 O2, dry basis, from the three test runs is

major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source	less than or equal to the formaldehyde emission limitation; and

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
of HAP.		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in Sec. 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 O2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in Sec. 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	a. Reduce CO emissions.	i. The average reduction of

100<=HP<=500 located at a major source of HAP, and existing non-emergency stationary CI RICE	emissions of CO or formaldehyde, as applicable determined from the

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
300<HP<=500 HP located at an area source of HAP. .		initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.
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 HP located at an area source of HAP.	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust.	i. The average formaldehyde or CO concentration, as applicable corrected to 15 percent O2, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.
13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source Of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year.	a. Install an oxidation catalyst.	i. You have to conduct intial compliance demonstration as specified in 63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O2;
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 Sec. 63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O2, or the average reduction of emissions of THC is 30 percent or more; ii. You have installed a CPMS to continuously monitor catalyst inlet temperature

			according to the requirements in Sec. 63.6625(b), or you have

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 [deg]F.

[76 FR 12867, Mar. 9, 2011]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, Operating Limitations, Work Practices, and Management Practices

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 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.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-	a. Reduce CO emissions and not using an oxidation catalyst, and using a	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved; [a]and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
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	CPMS	ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP, existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS	i. Collecting the monitoring data according to § 63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to § 63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
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.[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 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 ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
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 landfill or digester gas stationary SI RICE located at an area source of HAP, 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	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE	a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using oxidation catalyst or NSCR	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

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		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, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE	a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and not using oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
12. Existing limited use CI stationary RICE >500 HP and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year	a. Reduce CO or formaldehyde emissions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using an oxidation catalyst or NSCR	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

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		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 and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year	a. Reduce CO or formaldehyde emissions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and not using an oxidation catalyst or NSCR	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.

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.

[76 FR 12870, Mar. 9, 2011]

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	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	i. Semiannually according to the requirements in § 63.6650(b)(1)-(5) for engines that are not limited use stationary

For each ...	You must submit a ...	The report must contain ...	You must submit the report ...
> 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; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE > 500 HP located at an area source of HAP and operated more than 24 hours per calendar year; 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		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 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 c. If you had a malfunction during the reporting period, the information in § 63.6650(c)(4)	RICE subject to numerical emission limitations; and ii. Annually according to the requirements in § 63.6650(b)(6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations. i. Semiannually according to the requirements in § 63.6650(b). 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.

[75 FR 51603, Aug. 20, 2010]

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.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 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.
§ 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	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
	requirements		
§ 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	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
	deadlines		
§ 63.9(j)	Change in previous information	Yes.	
§ 63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§ 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.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 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]

Downloaded from the ECFR on January 7, 2013 and updated with January 30, 2013 amendments. The amendments are effective on April 1, 2013.

Indiana Department of Environmental Management
Office of Air Quality

Attachment F

Title 40: Protection of Environment

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

Subpart CCCCCC—National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

Source: 73 FR 1945, Jan. 10, 2008, unless otherwise noted.

What This Subpart Covers

§ 63.11110 What is the purpose of this subpart?

This subpart establishes national emission limitations and management practices for hazardous air pollutants (HAP) emitted from the loading of gasoline storage tanks at gasoline dispensing facilities (GDF). This subpart also establishes requirements to demonstrate compliance with the emission limitations and management practices.

§ 63.11111 Am I subject to the requirements in this subpart?

(a) The affected source to which this subpart applies is each GDF that is located at an area source. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank.

(b) If your GDF has a monthly throughput of less than 10,000 gallons of gasoline, you must comply with the requirements in §63.11116.

(c) If your GDF has a monthly throughput of 10,000 gallons of gasoline or more, you must comply with the requirements in §63.11117.

(d) If your GDF has a monthly throughput of 100,000 gallons of gasoline or more, you must comply with the requirements in §63.11118.

(e) An affected source shall, upon request by the Administrator, demonstrate that their monthly throughput is less than the 10,000-gallon or the 100,000-gallon threshold level, as applicable. For new or reconstructed affected sources, as specified in §63.11112(b) and (c), recordkeeping to document monthly throughput must begin upon startup of the affected source. For existing sources, as specified in §63.11112(d), recordkeeping to document monthly throughput must begin on January 10, 2008. For existing sources that are subject to this subpart only because they load gasoline into fuel tanks other than those in motor vehicles, as defined in §63.11132, recordkeeping to document monthly throughput must begin on January 24, 2011. Records required under this paragraph shall be kept for a period of 5 years.

(f) If you are an owner or operator of affected sources, as defined in paragraph (a) of this section, you are not required to obtain a permit under 40 CFR part 70 or 40 CFR part 71 as a result of being subject to this subpart. However, you must still apply for and obtain a permit under 40 CFR part 70 or 40 CFR part 71 if you meet one or more of the applicability criteria found in 40 CFR 70.3(a) and (b) or 40 CFR 71.3(a) and (b).

(g) The loading of aviation gasoline into storage tanks at airports, and the subsequent transfer of aviation gasoline within the airport, is not subject to this subpart.

(h) Monthly throughput is the total volume of gasoline loaded into, or dispensed from, all the gasoline storage tanks located at a single affected GDF. If an area source has two or more GDF at separate locations within the area source, each GDF is treated as a separate affected source.

(i) If your affected source's throughput ever exceeds an applicable throughput threshold, the affected source will remain subject to the requirements for sources above the threshold, even if the affected source throughput later falls below the applicable throughput threshold.

(j) The dispensing of gasoline from a fixed gasoline storage tank at a GDF into a portable gasoline tank for the on-site delivery and subsequent dispensing of the gasoline into the fuel tank of a motor vehicle or other gasoline-fueled engine or equipment used within the area source is only subject to §63.11116 of this subpart.

(k) For any affected source subject to the provisions of this subpart and another Federal rule, you may elect to comply only with the more stringent provisions of the applicable subparts. You must consider all provisions of the rules, including monitoring, recordkeeping, and reporting. You must identify the affected source and provisions with which you will comply in your Notification of Compliance Status required under §63.11124. You also must demonstrate in your Notification of Compliance Status that each provision with which you will comply is at least as stringent as the otherwise applicable requirements in this subpart. You are responsible for making accurate determinations concerning the more stringent provisions, and noncompliance with this rule is not excused if it is later determined that your determination was in error, and, as a result, you are violating this subpart. Compliance with this rule is your responsibility and the Notification of Compliance Status does not alter or affect that responsibility.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4181, Jan. 24, 2011]

§ 63.11112 What parts of my affected source does this subpart cover?

(a) The emission sources to which this subpart applies are gasoline storage tanks and associated equipment components in vapor or liquid gasoline service at new, reconstructed, or existing GDF that meet the criteria specified in §63.11111. Pressure/Vacuum vents on gasoline storage tanks and the equipment necessary to unload product from cargo tanks into the storage tanks at GDF are covered emission sources. The equipment used for the refueling of motor vehicles is not covered by this subpart.

(b) An affected source is a new affected source if you commenced construction on the affected source after November 9, 2006, and you meet the applicability criteria in §63.11111 at the time you commenced operation.

(c) An affected source is reconstructed if you meet the criteria for reconstruction as defined in §63.2.

(d) An affected source is an existing affected source if it is not new or reconstructed.

§ 63.11113 When do I have to comply with this subpart?

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to paragraphs (a)(1) and (2) of this section, except as specified in paragraph (d) of this section.

(1) If you start up your affected source before January 10, 2008, you must comply with the standards in this subpart no later than January 10, 2008.

(2) If you start up your affected source after January 10, 2008, you must comply with the standards in this subpart upon startup of your affected source.

(b) If you have an existing affected source, you must comply with the standards in this subpart no later than January 10, 2011.

(c) If you have an existing affected source that becomes subject to the control requirements in this subpart because of an increase in the monthly throughput, as specified in §63.11111(c) or §63.11111(d), you must comply with the standards in this subpart no later than 3 years after the affected source becomes subject to the control requirements in this subpart.

(d) If you have a new or reconstructed affected source and you are complying with Table 1 to this subpart, you must comply according to paragraphs (d)(1) and (2) of this section.

(1) If you start up your affected source from November 9, 2006 to September 23, 2008, you must comply no later than September 23, 2008.

(2) If you start up your affected source after September 23, 2008, you must comply upon startup of your affected source.

(e) The initial compliance demonstration test required under §63.11120(a)(1) and (2) must be conducted as specified in paragraphs (e)(1) and (2) of this section.

(1) If you have a new or reconstructed affected source, you must conduct the initial compliance test upon installation of the complete vapor balance system.

(2) If you have an existing affected source, you must conduct the initial compliance test as specified in paragraphs (e)(2)(i) or (e)(2)(ii) of this section.

(i) For vapor balance systems installed on or before December 15, 2009, you must test no later than 180 days after the applicable compliance date specified in paragraphs (b) or (c) of this section.

(ii) For vapor balance systems installed after December 15, 2009, you must test upon installation of the complete vapor balance system.

(f) If your GDF is subject to the control requirements in this subpart only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in §63.11132, you must comply with the standards in this subpart as specified in paragraphs (f)(1) or (f)(2) of this section.

(1) If your GDF is an existing facility, you must comply by January 24, 2014.

(2) If your GDF is a new or reconstructed facility, you must comply by the dates specified in paragraphs (f)(2)(i) and (ii) of this section.

(i) If you start up your GDF after December 15, 2009, but before January 24, 2011, you must comply no later than January 24, 2011.

(ii) If you start up your GDF after January 24, 2011, you must comply upon startup of your GDF.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 35944, June 25, 2008; 76 FR 4181, Jan. 24, 2011]

Emission Limitations and Management Practices

§ 63.11115 What are my general duties to minimize emissions?

Each owner or operator of an affected source under this subpart must comply with the requirements of paragraphs (a) and (b) of this section.

(a) You must, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) You must keep applicable records and submit reports as specified in §63.11125(d) and §63.11126(b).

[76 FR 4182, Jan. 24, 2011]

§ 63.11116 Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline.

(a) You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

(1) Minimize gasoline spills;

(2) Clean up spills as expeditiously as practicable;

(3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;

(4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

(b) You are not required to submit notifications or reports as specified in §63.11125, §63.11126, or subpart A of this part, but you must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(c) You must comply with the requirements of this subpart by the applicable dates specified in §63.11113.

(d) Portable gasoline containers that meet the requirements of 40 CFR part 59, subpart F, are considered acceptable for compliance with paragraph (a)(3) of this section.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4182, Jan. 24, 2011]

§ 63.11117 Requirements for facilities with monthly throughput of 10,000 gallons of gasoline or more.

(a) You must comply with the requirements in section §63.11116(a).

(b) Except as specified in paragraph (c) of this section, you must only load gasoline into storage tanks at your facility by utilizing submerged filling, as defined in §63.11132, and as specified in paragraphs (b)(1), (b)(2), or (b)(3) of this section. The applicable distances in paragraphs (b)(1) and (2) shall be measured from the point in the opening of the submerged fill pipe that is the greatest distance from the bottom of the storage tank.

(1) Submerged fill pipes installed on or before November 9, 2006, must be no more than 12 inches from the bottom of the tank.

(2) Submerged fill pipes installed after November 9, 2006, must be no more than 6 inches from the bottom of the tank.

(3) Submerged fill pipes not meeting the specifications of paragraphs (b)(1) or (b)(2) of this section are allowed if the owner or operator can demonstrate that the liquid level in the tank is always above the entire opening of the fill pipe. Documentation providing such demonstration must be made available for inspection by the Administrator's delegated representative during the course of a site visit.

(c) Gasoline storage tanks with a capacity of less than 250 gallons are not required to comply with the submerged fill requirements in paragraph (b) of this section, but must comply only with all of the requirements in §63.11116.

(d) You must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(e) You must submit the applicable notifications as required under §63.11124(a).

(f) You must comply with the requirements of this subpart by the applicable dates contained in §63.11113.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008; 76 FR 4182, Jan. 24, 2011]

§ 63.11118 Requirements for facilities with monthly throughput of 100,000 gallons of gasoline or more.

(a) You must comply with the requirements in §§63.11116(a) and 63.11117(b).

(b) Except as provided in paragraph (c) of this section, you must meet the requirements in either paragraph (b)(1) or paragraph (b)(2) of this section.

(1) Each management practice in Table 1 to this subpart that applies to your GDF.

(2) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(2)(i) and (ii) of this section, you will be deemed in compliance with this subsection.

(i) You operate a vapor balance system at your GDF that meets the requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.

(c) The emission sources listed in paragraphs (c)(1) through (3) of this section are not required to comply with the control requirements in paragraph (b) of this section, but must comply with the requirements in §63.11117.

(1) Gasoline storage tanks with a capacity of less than 250 gallons that are constructed after January 10, 2008.

(2) Gasoline storage tanks with a capacity of less than 2,000 gallons that were constructed before January 10, 2008.

(3) Gasoline storage tanks equipped with floating roofs, or the equivalent.

(d) Cargo tanks unloading at GDF must comply with the management practices in Table 2 to this subpart.

(e) You must comply with the applicable testing requirements contained in §63.11120.

(f) You must submit the applicable notifications as required under §63.11124.

(g) You must keep records and submit reports as specified in §§63.11125 and 63.11126.

(h) You must comply with the requirements of this subpart by the applicable dates contained in §63.11113.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008]

Testing and Monitoring Requirements

§ 63.11120 What testing and monitoring requirements must I meet?

(a) Each owner or operator, at the time of installation, as specified in §63.11113(e), of a vapor balance system required under §63.11118(b)(1), and every 3 years thereafter, must comply with the requirements in paragraphs (a)(1) and (2) of this section.

(1) You must demonstrate compliance with the leak rate and cracking pressure requirements, specified in item 1(g) of Table 1 to this subpart, for pressure-vacuum vent valves installed on your gasoline storage tanks using the test methods identified in paragraph (a)(1)(i) or paragraph (a)(1)(ii) of this section.

(i) California Air Resources Board Vapor Recovery Test Procedure TP–201.1E,—Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, adopted October 8, 2003 (incorporated by reference, see §63.14).

(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in §63.7(f).

(2) You must demonstrate compliance with the static pressure performance requirement specified in item 1(h) of Table 1 to this subpart for your vapor balance system by conducting a static pressure test on your gasoline storage tanks using the test methods identified in paragraphs (a)(2)(i), (a)(2)(ii), or (a)(2)(iii) of this section.

(i) California Air Resources Board Vapor Recovery Test Procedure TP–201.3,—Determination of 2-Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities, adopted April 12, 1996, and amended March 17, 1999 (incorporated by reference, see §63.14).

(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in §63.7(f).

(iii) Bay Area Air Quality Management District Source Test Procedure ST–30—Static Pressure Integrity Test—Underground Storage Tanks, adopted November 30, 1983, and amended December 21, 1994 (incorporated by reference, *see* §63.14).

(b) Each owner or operator choosing, under the provisions of §63.6(g), to use a vapor balance system other than that described in Table 1 to this subpart must demonstrate to the Administrator or delegated authority under paragraph §63.11131(a) of this subpart, the equivalency of their vapor balance system to that described in Table 1 to this subpart using the procedures specified in paragraphs (b)(1) through (3) of this section.

(1) You must demonstrate initial compliance by conducting an initial performance test on the vapor balance system to demonstrate that the vapor balance system achieves 95 percent reduction using the California Air Resources Board Vapor Recovery Test Procedure TP–201.1,—Volumetric Efficiency for Phase I Vapor Recovery Systems, adopted April 12, 1996, and amended February 1, 2001, and October 8, 2003, (incorporated by reference, see §63.14).

(2) You must, during the initial performance test required under paragraph (b)(1) of this section, determine and document alternative acceptable values for the leak rate and cracking pressure requirements specified in item 1(g) of Table 1 to this subpart and for the static pressure performance requirement in item 1(h) of Table 1 to this subpart.

(3) You must comply with the testing requirements specified in paragraph (a) of this section.

(c) Conduct of performance tests. Performance tests conducted for this subpart shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (*i.e.,* performance based on normal operating conditions) of the affected source. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(d) Owners and operators of gasoline cargo tanks subject to the provisions of Table 2 to this subpart must conduct annual certification testing according to the vapor tightness testing requirements found in §63.11092(f).

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4182, Jan. 24, 2011]

Notifications, Records, and Reports

§ 63.11124 What notifications must I submit and when?

(a) Each owner or operator subject to the control requirements in §63.11117 must comply with paragraphs (a)(1) through (3) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in §63.11117, unless you meet the requirements in paragraph (a)(3) of this section. If your affected source is subject to the control requirements in §63.11117 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in §63.11132, you must submit the Initial Notification by May 24, 2011. The Initial Notification must contain the information specified in paragraphs (a)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in §63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of §63.11117 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in §63.13, within 60 days of the applicable compliance date specified in §63.11113, unless you meet the requirements in paragraph (a)(3) of this section. The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facilities' monthly throughput is calculated based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (a)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (a)(1) of this section.

(3) If, prior to January 10, 2008, you are operating in compliance with an enforceable State, local, or tribal rule or permit that requires submerged fill as specified in §63.11117(b), you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (a)(1) or paragraph (a)(2) of this section.

(b) Each owner or operator subject to the control requirements in §63.11118 must comply with paragraphs (b)(1) through (5) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in §63.11118. If your affected source is subject to the control requirements in §63.11118 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in §63.11132, you must submit the Initial Notification by May 24, 2011. The Initial Notification must contain the information specified in paragraphs (b)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in §63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of §63.11118 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in §63.13, in accordance with the schedule specified in §63.9(h). The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facility's throughput is determined based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (b)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (b)(1) of this section.

(3) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(3)(i) and (ii) of this section, you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (b)(1) or paragraph (b)(2) of this subsection.

(i) You operate a vapor balance system at your gasoline dispensing facility that meets the requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(4) You must submit a Notification of Performance Test, as specified in §63.9(e), prior to initiating testing required by §63.11120(a) and (b).

(5) You must submit additional notifications specified in §63.9, as applicable.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008; 76 FR 4182, Jan. 24, 2011]

§ 63.11125 What are my recordkeeping requirements?

(a) Each owner or operator subject to the management practices in §63.11118 must keep records of all tests performed under §63.11120(a) and (b).

(b) Records required under paragraph (a) of this section shall be kept for a period of 5 years and shall be made available for inspection by the Administrator's delegated representatives during the course of a site visit.

(c) Each owner or operator of a gasoline cargo tank subject to the management practices in Table 2 to this subpart must keep records documenting vapor tightness testing for a period of 5 years. Documentation must include each of the items specified in §63.11094(b)(2)(i) through (viii). Records of vapor tightness testing must be retained as specified in either paragraph (c)(1) or paragraph (c)(2) of this section.

(1) The owner or operator must keep all vapor tightness testing records with the cargo tank.

(2) As an alternative to keeping all records with the cargo tank, the owner or operator may comply with the requirements of paragraphs (c)(2)(i) and (ii) of this section.

(i) The owner or operator may keep records of only the most recent vapor tightness test with the cargo tank, and keep records for the previous 4 years at their office or another central location.

(ii) Vapor tightness testing records that are kept at a location other than with the cargo tank must be instantly available (*e.g.,* via e-mail or facsimile) to the Administrator's delegated representative during the course of a site visit or within a mutually agreeable time frame. Such records must be an exact duplicate image of the original paper copy record with certifying signatures.

(d) Each owner or operator of an affected source under this subpart shall keep records as specified in paragraphs (d)(1) and (2) of this section.

(1) Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control and monitoring equipment.

(2) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.11115(a), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4183, Jan. 24, 2011]

§ 63.11126 What are my reporting requirements?

(a) Each owner or operator subject to the management practices in §63.11118 shall report to the Administrator the results of all volumetric efficiency tests required under §63.11120(b). Reports submitted under this paragraph must be submitted within 180 days of the completion of the performance testing.

(b) Each owner or operator of an affected source under this subpart shall report, by March 15 of each year, the number, duration, and a brief description of each type of malfunction which occurred during the previous calendar year and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.11115(a), including actions taken to correct a malfunction. No report is necessary for a calendar year in which no malfunctions occurred.

[76 FR 4183, Jan. 24, 2011]

Other Requirements and Information

§ 63.11130 What parts of the General Provisions apply to me?

Table 3 to this subpart shows which parts of the General Provisions apply to you.

§ 63.11131 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as the applicable State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or tribal agency.

(c) The authorities that cannot be delegated to State, local, or tribal agencies are as specified in paragraphs (c)(1) through (3) of this section.

(1) Approval of alternatives to the requirements in §§63.11116 through 63.11118 and 63.11120.

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.

(3) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

§ 63.11132 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act (CAA), or in subparts A and BBBBBB of this part. For purposes of this subpart, definitions in this section supersede definitions in other parts or subparts.

Dual-point vapor balance system means a type of vapor balance system in which the storage tank is equipped with an entry port for a gasoline fill pipe and a separate exit port for a vapor connection.

Gasoline means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater, which is used as a fuel for internal combustion engines.

Gasoline cargo tank means a delivery tank truck or railcar which is loading or unloading gasoline, or which has loaded or unloaded gasoline on the immediately previous load.

Gasoline dispensing facility (GDF) means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine used solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline-fueled engines and equipment.

Monthly throughput means the total volume of gasoline that is loaded into, or dispensed from, all gasoline storage tanks at each GDF during a month. Monthly throughput is calculated by summing the volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the current day, plus the total volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the previous 364 days, and then dividing that sum by 12.

Motor vehicle means any self-propelled vehicle designed for transporting persons or property on a street or highway.

Nonroad engine means an internal combustion engine (including the fuel system) that is not used in a motor vehicle or a vehicle used solely for competition, or that is not subject to standards promulgated under section 7411 of this title or section 7521 of this title.

Nonroad vehicle means a vehicle that is powered by a nonroad engine, and that is not a motor vehicle or a vehicle used solely for competition.

Submerged filling means, for the purposes of this subpart, the filling of a gasoline storage tank through a submerged fill pipe whose discharge is no more than the applicable distance specified in §63.11117(b) from the bottom of the tank. Bottom filling of gasoline storage tanks is included in this definition.

Vapor balance system means a combination of pipes and hoses that create a closed system between the vapor spaces of an unloading gasoline cargo tank and a receiving storage tank such that vapors displaced from the storage tank are transferred to the gasoline cargo tank being unloaded.

Vapor-tight means equipment that allows no loss of vapors. Compliance with vapor-tight requirements can be determined by checking to ensure that the concentration at a potential leak source is not equal to or greater than 100 percent of the Lower Explosive Limit when measured with a combustible gas detector, calibrated with propane, at a distance of 1 inch from the source.

Vapor-tight gasoline cargo tank means a gasoline cargo tank which has demonstrated within the 12 preceding months that it meets the annual certification test requirements in §63.11092(f) of this part.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4183, Jan. 24, 2011]

Table 1 to Subpart CCCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More[1]

If you own or operate	Then you must
1. A new, reconstructed, or existing GDF subject to §63.11118	Install and operate a vapor balance system on your gasoline storage tanks that meets the design criteria in paragraphs (a) through (h).
	(a) All vapor connections and lines on the storage tank shall be equipped with closures that seal upon disconnect.
	(b) The vapor line from the gasoline storage tank to the gasoline cargo tank shall be vapor-tight, as defined in §63.11132.
	(c) The vapor balance system shall be designed such that the pressure in the tank truck does not exceed 18 inches water pressure or 5.9 inches water vacuum during product transfer.
	(d) The vapor recovery and product adaptors, and the method of connection with the delivery elbow, shall be designed so as to prevent the over-tightening or loosening of fittings during normal delivery operations.
	(e) If a gauge well separate from the fill tube is used, it shall be provided with a submerged drop tube that extends the same distance from the bottom of the storage tank as specified in §63.11117(b).
	(f) Liquid fill connections for all systems shall be equipped with vapor-tight caps.
	(g) Pressure/vacuum (PV) vent valves shall be installed on the storage tank vent pipes. The pressure specifications for PV vent valves shall be: a positive pressure setting of 2.5 to 6.0 inches of water and a negative pressure setting of 6.0 to 10.0 inches of water. The total leak rate of all PV vent valves at an affected facility, including connections, shall not exceed 0.17 cubic foot per hour at a pressure of 2.0 inches of water and 0.63 cubic foot per hour at a vacuum of 4 inches of water.
	(h) The vapor balance system shall be capable of meeting the static pressure performance requirement of the following equation:
	$Pf = 2e^{-500.887/v}$
	Where:
	Pf = Minimum allowable final pressure, inches of water.
	v = Total ullage affected by the test, gallons.
If you own or operate	**Then you must**
	e = Dimensionless constant equal to approximately 2.718.
	2 = The initial pressure, inches water.

If you own or operate	Then you must
2. A new or reconstructed GDF, or any storage tank(s) constructed after November 9, 2006, at an existing affected facility subject to §63.11118	Equip your gasoline storage tanks with a dual-point vapor balance system, as defined in §63.11132, and comply with the requirements of item 1 in this Table.

[1]The management practices specified in this Table are not applicable if you are complying with the requirements in §63.11118(b)(2), except that if you are complying with the requirements in §63.11118(b)(2)(i)(B), you must operate using management practices at least as stringent as those listed in this Table.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 35944, June 25, 2008; 76 FR 4184, Jan. 24, 2011]

Table 2 to Subpart CCCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Cargo Tanks Unloading at Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More

If you own or operate	Then you must
A gasoline cargo tank	Not unload gasoline into a storage tank at a GDF subject to the control requirements in this subpart unless the following conditions are met:
	(i) All hoses in the vapor balance system are properly connected,
	(ii) The adapters or couplers that attach to the vapor line on the storage tank have closures that seal upon disconnect,
	(iii) All vapor return hoses, couplers, and adapters used in the gasoline delivery are vapor-tight,
	(iv) All tank truck vapor return equipment is compatible in size and forms a vapor-tight connection with the vapor balance equipment on the GDF storage tank, and
	(v) All hatches on the tank truck are closed and securely fastened.
	(vi) The filling of storage tanks at GDF shall be limited to unloading from vapor-tight gasoline cargo tanks. Documentation that the cargo tank has met the specifications of EPA Method 27 shall be carried with the cargo tank, as specified in §63.11125(c).

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4184, Jan. 24, 2011]

Table 3 to Subpart CCCCCC of Part 63—Applicability of General Provisions

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.1	Applicability	Initial applicability determination; applicability after standard established; permit requirements; extensions, notifications	Yes, specific requirements given in §63.11111.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.1(c)(2)	Title V Permit	Requirements for obtaining a title V permit from the applicable permitting authority	Yes, §63.11111(f) of subpart CCCCCC exempts identified area sources from the obligation to obtain title V operating permits.
§63.2	Definitions	Definitions for part 63 standards	Yes, additional definitions in §63.11132.
§63.3	Units and Abbreviations	Units and abbreviations for part 63 standards	Yes.
§63.4	Prohibited Activities and Circumvention	Prohibited activities; Circumvention, severability	Yes.
§63.5	Construction/Reconstruction	Applicability; applications; approvals	Yes, except that these notifications are not required for facilities subject to §63.11116.
§63.6(a)	Compliance with Standards/Operation & Maintenance—Applicability	General Provisions apply unless compliance extension; General Provisions apply to area sources that become major	Yes.
§63.6(b)(1)–(4)	Compliance Dates for New and Reconstructed Sources	Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for CAA section 112(f)	Yes.
§63.6(b)(5)	Notification	Must notify if commenced construction or reconstruction after proposal	Yes.
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source	No.
§63.6(c)(1)–(2)	Compliance Dates for Existing Sources	Comply according to date in this subpart, which must be no later than 3 years after effective date; for CAA section 112(f) standards, comply within 90 days of effective date unless compliance extension	No, §63.11113 specifies the compliance dates.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.6(c)(3)–(4)	[Reserved]		
§63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Area sources That become major must comply with major source standards by date indicated in this subpart or by equivalent time period (e.g., 3 years)	No.
§63.6(d)	[Reserved]		
63.6(e)(1)(i)	General duty to minimize emissions	Operate to minimize emissions at all times; information Administrator will use to determine if operation and maintenance requirements were met.	No. *See* §63.11115 for general duty requirement.
63.6(e)(1)(ii)	Requirement to correct malfunctions ASAP	Owner or operator must correct malfunctions as soon as possible.	No.
§63.6(e)(2)	[Reserved]		
§63.6(e)(3)	Startup, Shutdown, and Malfunction (SSM) Plan	Requirement for SSM plan; content of SSM plan; actions during SSM	No.
§63.6(f)(1)	Compliance Except During SSM	You must comply with emission standards at all times except during SSM	No.
§63.6(f)(2)–(3)	Methods for Determining Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.
§63.6(g)(1)–(3)	Alternative Standard	Procedures for getting an alternative standard	Yes.
§63.6(h)(1)	Compliance with Opacity/Visible Emission (VE) Standards	You must comply with opacity/VE standards at all times except during SSM	No.
§63.6(h)(2)(i)	Determining Compliance with Opacity/VE Standards	If standard does not State test method, use EPA Method 9 for opacity in appendix A of part 60 of this chapter and EPA Method 22 for VE in appendix A of part 60 of this chapter	No.
§63.6(h)(2)(ii)	[Reserved]		
§63.6(h)(2)(iii)	Using Previous Tests To Demonstrate Compliance With Opacity/VE Standards	Criteria for when previous opacity/VE testing can be used to show compliance with this subpart	No.
§63.6(h)(3)	[Reserved]		
§63.6(h)(4)	Notification of Opacity/VE Observation Date	Must notify Administrator of anticipated date of observation	No.
§63.6(h)(5)(i), (iii)–(v)	Conducting Opacity/VE Observations	Dates and schedule for conducting opacity/VE observations	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.6(h)(5)(ii)	Opacity Test Duration and Averaging Times	Must have at least 3 hours of observation with 30 6-minute averages	No.
§63.6(h)(6)	Records of Conditions During Opacity/VE Observations	Must keep records available and allow Administrator to inspect	No.
§63.6(h)(7)(i)	Report Continuous Opacity Monitoring System (COMS) Monitoring Data From Performance Test	Must submit COMS data with other performance test data	No.
§63.6(h)(7)(ii)	Using COMS Instead of EPA Method 9	Can submit COMS data instead of EPA Method 9 results even if rule requires EPA Method 9 in appendix A of part 60 of this chapter, but must notify Administrator before performance test	No.
§63.6(h)(7)(iii)	Averaging Time for COMS During Performance Test	To determine compliance, must reduce COMS data to 6-minute averages	No.
§63.6(h)(7)(iv)	COMS Requirements	Owner/operator must demonstrate that COMS performance evaluations are conducted according to §63.8(e); COMS are properly maintained and operated according to §63.8(c) and data quality as §63.8(d)	No.
§63.6(h)(7)(v)	Determining Compliance with Opacity/VE Standards	COMS is probable but not conclusive evidence of compliance with opacity standard, even if EPA Method 9 observation shows otherwise. Requirements for COMS to be probable evidence-proper maintenance, meeting Performance Specification 1 in appendix B of part 60 of this chapter, and data have not been altered	No.
§63.6(h)(8)	Determining Compliance with Opacity/VE Standards	Administrator will use all COMS, EPA Method 9 (in appendix A of part 60 of this chapter), and EPA Method 22 (in appendix A of part 60 of this chapter) results, as well as information about operation and maintenance to determine compliance	No.
§63.6(h)(9)	Adjusted Opacity Standard	Procedures for Administrator to adjust an opacity standard	No.
§63.6(i)(1)–(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.6(j)	Presidential Compliance Exemption	President may exempt any source from requirement to comply with this subpart	Yes.
§63.7(a)(2)	Performance Test Dates	Dates for conducting initial performance testing; must conduct 180 days after compliance date	Yes.
§63.7(a)(3)	CAA Section 114 Authority	Administrator may require a performance test under CAA section 114 at any time	Yes.
§63.7(b)(1)	Notification of Performance Test	Must notify Administrator 60 days before the test	Yes.
§63.7(b)(2)	Notification of Re-scheduling	If have to reschedule performance test, must notify Administrator of rescheduled date as soon as practicable and without delay	Yes.
§63.7(c)	Quality Assurance (QA)/Test Plan	Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing	Yes.
§63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.
63.7(e)(1)	Conditions for Conducting Performance Tests	Performance test must be conducted under representative conditions	No, §63.11120(c) specifies conditions for conducting performance tests.
§63.7(e)(2)	Conditions for Conducting Performance Tests	Must conduct according to this subpart and EPA test methods unless Administrator approves alternative	Yes.
§63.7(e)(3)	Test Run Duration	Must have three test runs of at least 1 hour each; compliance is based on arithmetic mean of three runs; conditions when data from an additional test run can be used	Yes.
	Alternative Test Method	Procedures by which Administrator can grant approval to use an intermediate or major change, or alternative to a test method	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.7(g)	Performance Test Data Analysis	Must include raw data in performance test report; must submit performance test data 60 days after end of test with the Notification of Compliance Status; keep data for 5 years	Yes.
§63.7(h)	Waiver of Tests	Procedures for Administrator to waive performance test	Yes.
§63.8(a)(1)	Applicability of Monitoring Requirements	Subject to all monitoring requirements in standard	Yes.
§63.8(a)(2)	Performance Specifications	Performance Specifications in appendix B of 40 CFR part 60 apply	Yes.
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring of Flares	Monitoring requirements for flares in §63.11 apply	Yes.
§63.8(b)(1)	Monitoring	Must conduct monitoring according to standard unless Administrator approves alternative	Yes.
§63.8(b)(2)–(3)	Multiple Effluents and Multiple Monitoring Systems	Specific requirements for installing monitoring systems; must install on each affected source or after combined with another affected source before it is released to the atmosphere provided the monitoring is sufficient to demonstrate compliance with the standard; if more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup	No.
§63.8(c)(1)	Monitoring System Operation and Maintenance	Maintain monitoring system in a manner consistent with good air pollution control practices	No.
§63.8(c)(1)(i)–(iii)	Operation and Maintenance of Continuous Monitoring Systems (CMS)	Must maintain and operate each CMS as specified in §63.6(e)(1); must keep parts for routine repairs readily available; must develop a written SSM plan for CMS, as specified in §63.6(e)(3)	No.
§63.8(c)(2)–(8)	CMS Requirements	Must install to get representative emission or parameter measurements; must verify operational status before or at performance test	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.8(d)	CMS Quality Control	Requirements for CMS quality control, including calibration, etc.; must keep quality control plan on record for 5 years; keep old versions for 5 years after revisions	No.
§63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	No.
§63.8(f)(1)–(5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	No.
§63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for continuous emissions monitoring system (CEMS)	No.
§63.8(g)	Data Reduction	COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least 4 equally spaced data points; data that cannot be used in average	No.
§63.9(a)	Notification Requirements	Applicability and State delegation	Yes.
§63.9(b)(1)–(2), (4)–(5)	Initial Notifications	Submit notification within 120 days after effective date; notification of intent to construct/reconstruct, notification of commencement of construction/reconstruction, notification of startup; contents of each	Yes.
§63.9(c)	Request for Compliance Extension	Can request if cannot comply by date or if installed best available control technology or lowest achievable emission rate	Yes.
§63.9(d)	Notification of Special Compliance Requirements for New Sources	For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date	Yes.
§63.9(e)	Notification of Performance Test	Notify Administrator 60 days prior	Yes.
§63.9(f)	Notification of VE/Opacity Test	Notify Administrator 30 days prior	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.9(g)	Additional Notifications when Using CMS	Notification of performance evaluation; notification about use of COMS data; notification that exceeded criterion for relative accuracy alternative	Yes, however, there are no opacity standards.
§63.9(h)(1)–(6)	Notification of Compliance Status	Contents due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after; when to submit to Federal vs. State authority	Yes, however, there are no opacity standards.
§63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change when notifications must be submitted	Yes.
§63.9(j)	Change in Previous Information	Must submit within 15 days after the change	Yes.
§63.10(a)	Recordkeeping/Reporting	Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source	Yes.
§63.10(b)(1)	Recordkeeping/Reporting	General requirements; keep all records readily available; keep for 5 years	Yes.
§63.10(b)(2)(i)	Records related to SSM	Recordkeeping of occurrence and duration of startups and shutdowns	No.
§63.10(b)(2)(ii)	Records related to SSM	Recordkeeping of malfunctions	No. *See* §63.11125(d) for recordkeeping of (1) occurrence and duration and (2) actions taken during malfunction.
§63.10(b)(2)(iii)	Maintenance records	Recordkeeping of maintenance on air pollution control and monitoring equipment	Yes.
§63.10(b)(2)(iv)	Records Related to SSM	Actions taken to minimize emissions during SSM	No.
§63.10(b)(2)(v)	Records Related to SSM	Actions taken to minimize emissions during SSM	No.
§63.10(b)(2)(vi)–(xi)	CMS Records	Malfunctions, inoperative, out-of-control periods	No.
§63.10(b)(2)(xii)	Records	Records when under waiver	Yes.
§63.10(b)(2)(xiii)	Records	Records when using alternative to relative accuracy test	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.10(b)(2)(xiv)	Records	All documentation supporting Initial Notification and Notification of Compliance Status	Yes.
§63.10(b)(3)	Records	Applicability determinations	Yes.
§63.10(c)	Records	Additional records for CMS	No.
§63.10(d)(1)	General Reporting Requirements	Requirement to report	Yes.
§63.10(d)(2)	Report of Performance Test Results	When to submit to Federal or State authority	Yes.
§63.10(d)(3)	Reporting Opacity or VE Observations	What to report and when	No.
§63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance extension	Yes.
§63.10(d)(5)	SSM Reports	Contents and submission	No. *See* §63.11126(b) for malfunction reporting requirements.
§63.10(e)(1)–(2)	Additional CMS Reports	Must report results for each CEMS on a unit; written copy of CMS performance evaluation; two-three copies of COMS performance evaluation	No.
§63.10(e)(3)(i)–(iii)	Reports	Schedule for reporting excess emissions	No.
§63.10(e)(3)(iv)–(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§63.8(c)(7)–(8) and 63.10(c)(5)–(13)	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.10(e)(3)(iv)–(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§63.8(c)(7)–(8) and 63.10(c)(5)–(13)	No, §63.11130(K) specifies excess emission events for this subpart.
§63.10(e)(3)(vi)–(viii)	Excess Emissions Report and Summary Report	Requirements for reporting excess emissions for CMS; requires all of the information in §§63.10(c)(5)–(13) and 63.8(c)(7)–(8)	No.
§63.10(e)(4)	Reporting COMS Data	Must submit COMS data with performance test data	No.
§63.10(f)	Waiver for Recordkeeping/Reporting	Procedures for Administrator to waive	Yes.
§63.11(b)	Flares	Requirements for flares	No.
§63.12	Delegation	State authority to enforce standards	Yes.
§63.13	Addresses	Addresses where reports, notifications, and requests are sent	Yes.
§63.14	Incorporations by Reference	Test methods incorporated by reference	Yes.
§63.15	Availability of Information	Public and confidential information	Yes.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4184, Jan. 24, 2011]

Indiana Department of Environmental Management
Office of Air Quality

Attachment G

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

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

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

§ 60.40c Applicability and delegation of authority.

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

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

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (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 (SO_2).

(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:

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

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:

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

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:

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

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).

[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]

§ 60.48c 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]

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Significant Source Modification and a Part 70 Operating Permit

Source Background and Description

Source Name:	Central Indiana Ethanol, LLC
Source Location:	2955 West Delphi Pike, Marion, IN 46952
County:	Grant
SIC Code:	2869 (Industrial Organic Chemicals)
Significant Source Modification No.:	053-32519-00062
Title V Operation Permit No.:	T053-32070-00062
Permit Reviewer:	John Haney/Julie Alexander

The Office of Air Quality (OAQ) has reviewed the operating permit application from Central Indiana Ethanol, LLC relating to the operation of a stationary ethanol production plant, capable of producing both dried distillers grain solubles (DDGS) and wet distillers grain solubles (WDGS). On June 29, 2012, Central Indiana Ethanol, LLC submitted an application to the OAQ relating to the transition of the source's operating permit from a Federally Enforceable State Operating Permit (FESOP) to a Part 70 Operating Permit. On November 15, 2012, Central Indiana Ethanol, LLC also submitted an application to the OAQ relating to the addition of a non-fuel grade ethanol distillation process. On February 19, 2013, Central Indiana Ethanol, LLC submitted an application to the OAQ relating to the addition of a fork truck unloading area. Central Indiana Ethanol, LLC was issued its FESOP Renewal No. F053-29180-00062 on September 27, 2010.

Source Definition

The Central Indiana Ethanol (CIE) plant (source number 053-00062) sells carbon dioxide (CO2), a byproduct of its ethanol production, to the EPCO plant. The EPCO plant processes the CO2 into a marketable product. The EPCO plant leases property next to the CIE plant.

IDEM, OAQ has examined whether these two plants should be considered one “major source” as defined at 326 IAC 2-7-1(22). In order for two 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 CIE plant is owned by Central Indiana Ethanol, LLC. The EPCO plant is owned by EPCO Carbon Dioxide Products Incorporated. The two companies do not have common directors on their board of directors and they do not have any corporate officers in common. There is no common ownership between the two plants.

IDEM’s Nonrule Policy Document Air-005 applies to the definition of “major source” in 326 IAC 2-7-1(22). IDEM’s Nonrule Policy Document Air-005 sets out two independent tests to determine if common control exists when there is no common ownership. 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.

The EPCO plant does not provide a necessary raw material to the CIE plant and does not perform an integral part of the ethanol production process. Since the EPCO plant does not directly serve the purpose of the CIE plant the first common control test is not met.

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. The EPCO plant's output, its work, is processing and compressing CO2. The EPCO plant supplies 100% of its work to the CIE plant. If the CIE plant were to shut down the EPCO plant would have no CO2 feedstock and would also shut down. Therefore the second common control test is met.

U.S. EPA has a similar view of common control. U.S. EPA relies on an examination of who has the power to manage pollution-emitting activities of the sources, including the power to make or veto decisions to control emissions or to influence production levels or compliance with environmental regulations. The actual determination is done on a case by case basis based on the facts presented. A January 10, 2012 letter from U.S. EPA Region III to the Virginia Department of Environmental Quality involved examining the relationship between a new power plant, GPC and an existing landfill, Suffolk Energy Partners (SEP). This letter is available at http://www.epa.gov/region07/air/title5/t5memos/gpc2012.pdf on the Internet. The parties' agreement called for SEP to sell all of its landfill gas to GPC and for GPC to buy all the landfill gas. Based on this agreement, as well as the dependency of GPC on the landfill for its only fuel, U.S. EPA concluded that they were under common control.

EPCO has an agreement with CIE to purchase CIE's CO2. Each plant is responsible for its own air quality control requirements. CIE can control the amount of CO2 that EPCO will receive. This gives the CIE plant the power to control the amount of marketable CO2 that the EPCO plant can produce. If the CIE plant were to shut down or stop selling its CO2 to the EPCO plant, the EPCO plant would have to stop production completely. The EPCO plant has no other source of raw CO2. Since the EPCO plant is totally reliant on the CIE plant for its sole raw material, the CIE plant can exert control over the EPCO plant's production levels.

IDEM finds that the two plants are under common control, meeting the first part of the major source definition.

The SIC 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. Both the CIE plant and the EPCO plant have the two-digit SIC Code 28 for the Major Group Chemicals and Allied Products.

A plant is a support facility to another plant if it dedicates 50% or more of its output to another plant. The EPCO plant provides 100% of its output, its work, to the CIE plant. The plants have a support relationship. Since the plants have a support relationship as well as the same two-digit SIC Code, the second part of the major source definition is met.

The two plants are located on properties that share a common border. The plant properties are contiguous, meeting the third element of the major source definition. The CIE plant and the EPCO plant meet all three parts of the major source definition. Therefore, IDEM, OAQ has determined that the two plants are part of the same major source.

Permitted Emission Units and Pollution Control Equipment

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

(a) Three (3) corn dump pits, identified as EU001, constructed in 2006, each with a maximum throughput rate of 420 tons of corn per hour, controlled by baghouse CE001, and exhausting through stack EP001. This consists of two (2) truck dump pits and one (1) railcar dump pit.

(b) One (1) grain handling operation, constructed in 2006, controlled by baghouse CE001, exhausting through stack EP001, and consisting of the following:

(1) One (1) corn conveyor, identified as EU002, with a maximum throughput rate of 420 tons per hour.

(2) One (1) corn elevator, identified as EU003, with a maximum throughput rate of 420 tons per hour.

(3) Two (2) corn storage bins, identified as EU004 and EU005, each with a maximum capacity of 200,000 bushels and maximum throughput rate of 420 tons per hour.

(4) One (1) scalper, identified as EU006, with a maximum throughput rate of 140 tons per hour.

(5) One (1) surge bin, identified as EU007, with a maximum throughput rate of 140 tons per hour.

(6) One (1) corn storage bin, identified as EU064, (constructed in 2008) with a maximum capacity of 750,000 bushels and maximum throughput rate of 420 tons per hour.

(c) One (1) corn storage bin, identified as EU066, approved for construction in 2010, with a maximum capacity of 750,000 bushels and a maximum throughput rate of 420 tons per hour, utilizing no control devices, and exhausting to the atmosphere.

(d) Three (3) hammermills, identified as EU010, EU011, and EU067, with EU010 and EU011 constructed in 2006 and EU067 approved for construction in 2010, each with a maximum throughput rate of 140 tons of corn per hour, controlled by baghouse CE003, and exhausting through stack EP003.

(e) One (1) receiving and transfer system, approved for construction in 2011, consisting of:

(1) One (1) unloading area, consisting of:

(A) One (1) truck unloading area, identified as EU070, with a maximum capacity of 25 tons of material per hour, consisting of two (2) pneumatic truck unloading conveyors, identified as EU071 and EU072, with a combined maximum capacity of 25 tons of material per hour, with particulate emissions controlled by one (1) baghouse, identified as CE015, with all emissions exhausted through stack EP015.

(B) One (1) railcar unloading area, identified as EU073, with a maximum capacity of 25 tons of material per hour, consisting of one (1) pneumatic railcar unloading conveyor, identified as EU074, with a maximum capacity of 25 tons of material per hour, with particulate emissions

controlled by one (1) baghouse, identified as CE015, with all emissions exhausted through stack EP015.

(C) One (1) fork truck unloading area, identified as EU075, with a maximum capacity of 25 tons of material per hour, approved in 2013 for modification, with particulate emissions vented through either of the following:

(i) One (1) manual conveyance system, controlled by baghouse CE016, exhausting to stack EP016.

(ii) One (1) pneumatic conveyance system, controlled by baghouse CE022, exhausting to stack EP022.

(D) One (1) truck unloading area, identified as EU080, with a maximum capacity of 25 tons of material per hour, consisting of one (1) conveyor, with particulate emissions controlled by one (1) baghouse, identified as CE018, with all emissions exhausted through stack EP018. The baghouse has a grain loading of 0.0000295 grain/dscf and 1,300 scfm air flow rate.

Note: The raw material is confidential information.

(2) One (1) storage process, consisting of two (2) storage bins, identified as EU076 and EU077, with a combined maximum capacity of 250 tons and a maximum throughput rate of 25 tons per hour, with particulate emissions controlled by one (1) baghouse, identified as CE015, with all emissions exhausted through stack EP015.

(3) One (1) process feed area, with an airlock and connection from EU080, consisting of two (2) surge hoppers, identified as EU078 and EU079, feeding material received from the storage bins to the cook process or materials received from truck unloading area (EU080) to the cook process, with a maximum capacity of 25 tons of material per hour, with particulate emissions controlled by one (1) baghouse, identified as CE017, and exhausting through stack EP017.

(f) One (1) fermentation process, constructed in 2006, with a maximum throughput rate of 7,060 gallons of ethanol per hour, controlled by CO_2 wet scrubbers CE005 (vented to stack EP005) and CE010 (vented to stack EP010), and consisting of the following:

(1) Four (4) fermenters, identified as EU016, EU017, EU018, and EU019.

(2) One (1) beer well, identified as EU020.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(g) One (1) thermal oxidizer with heat recovery steam generator (TO/HRSG) system, identified as CE007, constructed in 2006, with a maximum heat input capacity of 135 MMBtu/hr, using natural gas and process waste gases from the DDGS dryers as fuels, with emissions exhausted through stack EP007.

Under 40 CFR 60, Subpart Db, CE007 is an affected facility.

(h) One (1) distillation process, constructed in 2006, with a maximum throughput rate of

6,850 gallons of ethanol per hour, controlled by TO/HRSG system CE007, exhausting through stack EP007, and consisting of the following:

(1) Two (2) slurry mixers, identified as EU049 and EU058.

(2) One (1) slurry tank, identified as EU050.

(3) Three (3) liquefaction tanks, identified as EU014, EU051, and EU059, each with a maximum capacity of 7,000 gallons per hour.

(4) One (1) cook tube, identified as EU052.

(5) One (1) flash tank, identified as EU053.

(6) One (1) yeast tank, identified as EU015.

(7) One (1) 190 proof condenser, identified as EU054.

(8) One (1) 200 proof condenser, identified as EU055.

(9) One (1) beer stripper, identified as EU021.

(10) One (1) side stripper, identified as EU022.

(11) One (1) rectifier, identified as EU023.

(12) Molecular sieve units, identified as EU024.

(13) Eight (8) evaporators, identified as EU025.

(14) Four (4) centrifuges, identified as EU026 through EU029.

(15) One (1) slurry tank, identified as EU068, approved for construction in 2010.

(16) One (1) centrifuge, identified as EU069, approved for construction in 2010.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(i) Two (2) natural gas fired DDGS dryers, identified as EU035 and EU056, constructed in 2006, each with a maximum heat input rate of 45 MMBtu/hr and a maximum throughput rate of 34 tons of DDGS per hour, controlled by multiclone CE006, with emissions venting to Thermal Oxidizer/Heat Recovery Steam Generating (TO/HRSG) System CE007, and exhausting to stack EP007.

(j) One (1) DDGS cooler, identified as EU036, constructed in 2006, with a maximum throughput rate of 34 tons/hr of DDGS, controlled by baghouse CE014, and exhausting to stack EP014.

(k) One (1) DDGS loadout operation, constructed in 2006, with a maximum throughput rate of 101 tons per hour, controlled by baghouse CE008, exhausting to stack EP008, and consisting of the following:

(1) One (1) DDGS dump pit, identified as EU040.

(2) One (1) DDGS elevator, identified as EU041.

(3) One (1) DDGS conveyor, identified as EU042.

(4) One (1) DDGS load spout, identified as EU043.

(l) One (1) ethanol loading rack for trucks, identified as EU045A, constructed in 2006, with a maximum throughput rate of 800 gallons per minute. The truck loading process is controlled by the enclosed flare CE009, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP009.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(m) One (1) ethanol loading rack for railcars, identified as EU045B, constructed in 2006, with a maximum throughput rate of 1000 gallons per minute. The railcar loading process is controlled by the enclosed flare CE009, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP009.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

Emission Units and Pollution Control Equipment Removed From the Source

The source has removed the following insignificant activities:

(k) Other emission units, not regulated by a NESHAP, with PM_{10}, NO_x, and SO_2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(10) One (1) E-98 (racing fuel) storage tank, identified as T011, approved for construction in 2010, with a maximum capacity of 1,000 gallons of E-98 racing fuel, and exhausting to the atmosphere.

(11) One (1) 114-octane racing fuel additive storage tank, identified as T012, approved for construction in 2010, with a maximum capacity of 500 gallons of additive, and exhausting to the atmosphere.

Insignificant Activities

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

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, including space heaters with a combined heat input capacity not to exceed 2.5 million (2,500,000) Btu per hour.

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

(c) Forced and induced draft cooling tower systems not regulated under a NESHAP, consisting of:

(1) One (1) four cell cooling tower, identified as F004, with a circulation rate of 33,000 gallons per minute.

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

(e) Heat exchanger cleaning and repair.

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

(g) Paved roads and parking lots with public access. [326 IAC 6-4] [326 IAC 6-5]

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

(i) Farm operations.

(j) Stationary fire pumps, including one (1) emergency diesel fire pump, identified as EU034, constructed in 2006, with a maximum power rating of 350 horsepower, and exhausting to stack EP006. [326 IAC 2-2]

Under 40 CFR Part 63, Subpart ZZZZ, EU034 is an affected unit.

(k) Other emission units, not regulated by a NESHAP, with PM_{10}, NO_x, and SO_2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(1) One (1) 190 proof tank, identified as T001, constructed in 2006, with a maximum capacity of 100,000 gallons.

Under 40 CFR 60, Subpart Kb, T001 is an affected facility.

(2) One (1) 200 proof tank, identified as T002, constructed in 2006, with a maximum capacity of 100,000 gallons.

Under 40 CFR 60, Subpart Kb, T002 is an affected facility.

(3) One (1) denaturant tank, identified as T003, constructed in 2006, with a maximum capacity of 100,000 gallons. [326 IAC 8-4-3]

Under 40 CFR 60, Subpart Kb, T003 is an affected facility.

(4) Two (2) denatured ethanol tanks, identified as T004 and T005, constructed in 2006, each with a maximum capacity of 750,000 gallons.

Under 40 CFR 60, Subpart Kb, T004 and T005 are affected facilities.

(5) One (1) fuel additive tank, identified as T006, constructed in 2006, with a maximum storage capacity of 2,300 gallons.

(6) One (1) diesel storage tank, identified as T007, constructed in 2006, with a maximum storage capacity of 1,000 gallons.

(7) One (1) gasoline storage tank, identified as T008, approved for construction in 2010, with a maximum capacity of 350 gallons of gasoline, and exhausting to the atmosphere. [326 IAC 8-4-6] [326 IAC 8-4-9]

Under 40 CFR 63, Subpart CCCCCC, T008 is an affected facility.

(8) One (1) diesel storage tank, identified as T009, approved for construction in 2010, with a maximum capacity of 1,000 gallons of diesel fuel, and exhausting to the atmosphere.

(9) One (1) E-85 storage tank, identified as T010, approved for construction in 2010, with a maximum capacity of 1,000 gallons of E-85 fuel, and exhausting to the atmosphere.

(10) One (1) biomethanator, identified as EU048, constructed in 2006, controlled by 6.0 MMBtu/hr biomethanator flare CE013, and exhausting to stack EP013. [326 IAC 2-2]

(11) One (1) corn oil separation unit, identified as EU061.

(12) One (1) corn oil storage tank, identified as EU062, with a maximum capacity of 35,000 gallons.

EPCO Carbon Dioxide Products

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, including space heaters with a combined heat input capacity not to exceed 0.63 million (630,000) Btu per hour.

(b) Forced and induced draft cooling tower systems not regulated under a NESHAP, consisting of:

(1) One (1) four cell cooling tower, identified as EPCO, with a circulation rate of 900 gallons per minute.

(c) Paved roads and parking lots with public access. [326 IAC 6-4] [326 IAC 6-5]

Existing Approvals

The source was issued its FESOP Renewal No. F053-29180-00062 on September 27, 2010. The source has since received the following approvals:

Permit Type	Permit Number	Issuance Date
Minor Permit Revision	053-30294-00062	April 13, 2011
Administrative Amendment	053-30470-00062	May 27, 2011
Interim Significant Source Modification	053-32519I-00062	January 18, 2013

Permit Type	Permit Number	Issuance Date
Minor Source Modification	053-32842-00062	February 26, 2013

All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

The following terms and conditions from previous approvals have been determined no longer applicable; therefore, were not incorporated into this Part 70 Operating Permit:

(a) All construction conditions from all previously issued permits.

Reason not incorporated: All facilities previously permitted have already been constructed; therefore, the construction conditions are no longer necessary as part of the operating permit. Any facilities that were previously permitted but have not yet been constructed would need new pre-construction approval before beginning construction.

(b) All FESOP conditions.

Reason not incorporated: The source applied for a TV permit; therefore, the FESOP conditions are no longer applicable.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Grant County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Attainment effective December 29, 2005, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.
Unclassifiable or attainment effective April 5, 2005, for $PM_{2.5}$.

(a) Ozone Standards
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. Grant County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Grant County has been classified as attainment for $PM_{2.5}$. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011, the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct $PM_{2.5}$ and, SO_2, and NO_X emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Grant County has been classified as attainment or unclassifiable in Indiana for all regulated 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.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source, prior to the proposed modification.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	Greater than 250
PM_{10}	Greater than 250
$PM_{2.5}$	Greater than 250
SO_2	Greater than 100, Less than 250
VOC	Greater than 250
CO	Greater than 250
NO_x	Greater than 100, Less than 250
GHGs as CO_2e	Greater than 100,000
Acetaldehyde	Less than 10
Total HAPs	Greater than 25

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM_{10}, $PM_{2.5}$, SO_2, VOC, CO, and NO_x is equal to or greater than 100 tons per year, each. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of GHGs is equal to or greater than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit.

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(d) On July 20, 2011, U.S. EPA issued a deferral of biogenic CO_2 emissions from PSD and Title V. Therefore, these CO_2 emissions were not included in the listed GHG emissions.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7 because the source met the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Proposed Modification
Non-fuel Grade Ethanol Distillation Process

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Central Indiana Ethanol, LLC on November 15, 2012, relating to the addition of a proposed non-fuel grade ethanol distillation process. On January 1, 2013, IDEM issued an interim significant source modification for this modification. The following is a list of the proposed emission units and pollution control devices:

(n) One (1) distillation process, approved in 2013 for construction, with a maximum throughput rate of 40,000 gallons of non-fuel grade ethanol per hour, consisting of the following:

(1) Three (3) distillation columns and seven (7) condensers operating in a close loop.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(2) Two (2) liquid storage tanks, identified as T013 and T014, each with a maximum capacity of 500,000 gallons.

Under 40 CFR 60, Subpart Kb, T013 and T014 are affected facilities.

(3) Three (3) liquid storage tanks, identified as T015, T016, and T017, each with a maximum capacity of 24,000 gallons.

Under 40 CFR 60, Subpart Kb, T015, T016, and T017 are affected facilities.

(4) Two (2) natural gas fired boilers, identified as Boiler #1 (EU081) and Boiler #2 (EU082), each with a maximum heat input rate of 48.16 MMBtu/hr, exhausting uncontrolled to stacks EP020 and EP021, respectively.

Under 40 CFR 60, Subpart Dc, EU081 and EU082 are affected facilities.

(o) One (1) non-fuel grade ethanol loading skid for trucks, identified as EU083, approved in 2013 for construction, with a maximum throughput rate of 1000 gallons per minute. The truck loading process is controlled by the enclosed flare CE019, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP019.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(p) One (1) non-fuel grade ethanol loading skid for railcars, identified as EU084, approved in 2013 for construction, with a maximum throughput rate of 1667 gallons per minute. The railcar loading process is controlled by the enclosed flare CE019, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP019.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

Insignificant Activities

(c) Forced and induced draft cooling tower systems not regulated under a NESHAP, consisting of:

(2) One (1) four cell cooling tower, identified as F004, with a circulation rate of 21,000 gallons per minute.

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (^{0}F)
EP019	Loadout Skid Flare (CE019)	20	2.50	6,400	900
EP020	Boiler #1 (EU081)	38	2.67	TBD	TBD
EP021	Boiler #2 (EU082)	38	2.67	TBD	TBD

Source Status Prior to the Modification

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:

Pollutant	Emissions (ton/yr)
PM	Great than 100, Less than 250
PM10	Less than 100
PM2.5	Less than 100
SO2	Less than 100
VOC	Less than 100
CO	Less than 100
NOX	Less than 100
GHGs as CO2e	Greater than 100,000
Single HAP (acetaldehyde)	Less than 10
Total HAPs	Less than 25

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no regulated pollutant is emitted at a rate of two hundred fifty (250) tons per year or more and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of GHGs is equal to or greater than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit.

On July 20, 2011 U.S. EPA issued a deferral of Biogenic CO2 emissions from PSD and Title V. Therefore, these CO2 emissions were not included in the listed GHG emissions.

(c) This existing source is not a major source of HAPs, as defined in 40 CFR 63.2, because HAPs emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Permit Level Determination – Part 70

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.

Increase in PTE Before Controls of the Modification	
Pollutant	Potential To Emit (tons/yr)
PM	0.79
PM_{10}	3.14
$PM_{2.5}$	3.14
SO_2	0.25
VOC	65.81
CO	57.34
NO_x	54.85
GHGs as CO_2e	55,119
Single Worst HAP	Less than 10
Total HAPs	Less than 25

Appendix A of this TSD reflects the unrestricted potential emissions of the modification.

This source modification is subject to 326 IAC 2-7-10.5(g)(4) because the potential to emit nitrogen oxides (NO_x) and VOC is greater than twenty-five (25) tons per year before control, each.

On January 1, 2013, IDEM issued an interim significant source modification for this modification. The modification is subject to the requirements of 326 IAC 2-7-12(d), for a significant permit modification because the modification requires significant changes in existing monitoring Part 70 permit terms and conditions. Specifically, the modification incorporates applicable portions of the following New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) under Title I of the Clean Air Act (CAA):

- NSPS for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR 60, Subpart Dc);

- NSPS for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984 (40 CFR 60, Subpart Kb);

- NSPS for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 (40 CFR 60, Subpart VVa); and

- NESHAP for Source Category: Gasoline Dispensing Facilities (40 CFR Part 63, Subpart CCCCCC).

However, because the source is transitioning its operating permit from a Federally Enforceable State Operating Permit (FESOP) to a Part 70 Operating Permit, the issuance of the Part 70 Operating Permit itself will grant the source the appropriate operating approval for the proposed modification. Therefore, there will be no need to issue a distinct significant permit modification for this proposed modification.

Permit Level Determination – PSD

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 source modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	Potential To Emit (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs	Total HAPs	Worst Single HAP(1)
Boiler #1 and Boiler #2	0.79	3.14	3.14	0.25	41.36	2.27	34.74	49,935	0.78	0.74
Non-Fuel Grade Ethanol Loadout and Flare	negl.	negl.	negl.	negl.	2.31	0.22	3.87	5,184	0.08	0.09
Total for Modification	**0.79**	**3.14**	**3.14**	**0.25**	**43.67**	**2.49**	**38.61**	**55,119**	**0.86**	**0.83**
PSD Major Source Thresholds	250	250	250	250	250	250	250	N/A	N/A	N/A
Significant Level	N/A	N/A	N/A	N/A	N/A	N/A	N/A	75,000 CO_2e	N/A	N/A

negl. = negligible
*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM_{10}), not particulate matter (PM), is considered as a "regulated air pollutant".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.
(1) Worst Single HAP for the project is hexane.

This modification to an existing minor stationary source is not major because the emissions increase is less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

On July 20, 2011, U.S. EPA issued a deferral of biogenic CO_2 emissions from PSD and Title V. Therefore, these CO_2 emissions were not included in the listed GHG emissions.

Proposed Modification
Fork Truck Unloading Area (EU075)

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Central Indiana Ethanol, LLC on February 19, 2013, relating to the addition of a pneumatic conveyance system for the existing fork truck unloading area (EU075). On February 26, 2013, IDEM issued a minor source modification for this modification. The following is a list of the modified emission unit and pollution control device:

(e) One (1) receiving and transfer system, approved for construction in 2011, consisting of:

(1) One (1) unloading area, consisting of:

(C) One (1) fork truck unloading area, identified as EU075, with a maximum capacity of 25 tons of material per hour, approved in 2013 for modification, with particulate emissions vented through either of the following:

(i) One (1) manual conveyance system, controlled by baghouse CE016, exhausting to stack EP016.

(ii) One (1) pneumatic conveyance system, controlled by baghouse CE022, exhausting to stack EP022.

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (^{0}F)
EP022	Fork Truck Unloading Area (EU075) - Pneumatic	29.5	3.6	22,500	70

Source Status Prior to the Modification

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:

Pollutant	Emissions (ton/yr)
PM	Great than 100, Less than 250
PM10	Less than 100
PM2.5	Less than 100
SO2	Less than 100
VOC	Less than 100
CO	Great than 100, Less than 250
NOX	Great than 100, Less than 250
GHGs as CO2e	Greater than 100,000
Single HAP (acetaldehyde)	Less than 10
Total HAPs	Less than 25

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because the emissions of GHGs are greater than one hundred thousand (100,000) tons of CO2 equivalent emissions (CO2e) per year.

On July 20, 2011 U.S. EPA issued a deferral of Biogenic CO2 emissions from PSD and Title V. Therefore, these CO2 emissions were not included in the listed GHG emissions.

(b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.2, because HAPs emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Permit Level Determination – Part 70

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.

PTE Change of the Modified Process			
Pollutant	**PTE Before Modification** (tons/yr)	**PTE After Modification** (tons/yr)	**Increase from Modification** (tons/yr)
PM	2.77	27.69	24.92
PM_{10}	2.77	27.69	24.92
$PM_{2.5}$	2.77	27.69	24.92
SO_2	-	-	-
VOC	-	-	-
CO	-	-	-
NO_X	-	-	-
HAPs	-	-	-

This source modification is subject to 326 IAC 2-7-10.5(d)(3)(A) because the potential to emit particulate matter (PM) and particulate matter less than ten microns (PM_{10}) is each greater than five (5) tons per year and less than twenty-five (25) tons per year before control.

On February 26, 2013, IDEM issued a minor source modification for this modification. Additionally, this modification will be incorporated into the Part 70 Operating Permit through a minor permit modification issued pursuant to 326 IAC 2-7-12(b)(1) because the modification:

(a) Does not violate any applicable requirement;

(b) Does not involve significant changes to existing monitoring, reporting, or record keeping requirements in the Part 70 permit;

(c) Does not require or change a:

(1) case-by-case determination of an emission limitation or other standard;

(2) source specific determination for temporary sources of ambient impacts; or

(3) visibility or increment analysis;

(d) Does not seek to establish or change a Part 70 permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. The terms and conditions include the following:

(1) A federally enforceable emissions cap assumed to avoid classification as a modification under any provision of Title I of the CAA; or

(2) An alternative emissions limit approved under regulations promulgated under Section 112(i)(5) of the CAA;

(e) Is not a modification under any provision of Title I of the CAA;

(f) Is not the addition of a clean unit that was automatically designated as described in 326 IAC 2-2.2-1 or 326 IAC 2-3.2-1;

(g) Is not the addition of a listed PCP as defined in 326 IAC 2-2-1(ll) or 326 IAC 2-3-1(gg); or

(h) Is not required by the Part 70 program to be processed as a significant modification.

However, because the source is transitioning its operating permit from a Federally Enforceable State Operating Permit (FESOP) to a Part 70 Operating Permit, the issuance of the Part 70 Operating Permit itself will grant the source the appropriate operating approval for the proposed modification. Therefore, there will be no need to issue a distinct minor permit modification for this proposed modification.

Permit Level Determination – PSD

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 source modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential to Emit (tons/yr)							
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**VOC**	**CO**	**NO_X**	**GHGs**
Fork Truck Unloading Area (EU075) - Pneumatic	2.79	2.79	2.79	-	-	-	-	-
Total for Modification	**2.79**	**2.79**	**2.79**	**0**	**0**	**0**	**0**	**0**
PSD Major Source Thresholds	250	250	250	250	250	250	250	N/A
Significant Level	N/A	N/A	N/A	N/A	N/A	N/A	N/A	75,000 CO_2e

*$PM_{2.5}$ listed is direct $PM_{2.5}$.

This modification to an existing minor stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

On July 20, 2011, U.S. EPA issued a deferral of biogenic CO_2 emissions from PSD and Title V. Therefore, these CO_2 emissions were not included in the listed GHG emissions.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any new control equipment is considered federally enforceable only after issuance of this Part 70 permit renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	**Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)**									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs	Total HAPs	Worst Single HAP[1]
Grain Receiving and Handling	7.31	7.31	7.31	-	-	-	-	-	-	-
Hammermills	5.26	5.26	5.26	-	-	-	-	-	-	-
DDGS Handling and Loadout	0.70	0.70	0.70	-	-	-	-	-	-	-

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs	Total HAPs	Worst Single HAP[1]
DDGS Cooler	4.12	4.12	4.12	-	-	6.83	-	-	0.53	0.33
Corn Storage Bin	64.39	14.35	14.35	-	-	-	-	-	-	-
Truck & Railcar Unloading Areas and Storage Bins	3.54	3.54	3.54	-	-	-	-	-	-	-
Fork Truck Unloading Area	*2.79*	*2.79*	*2.79*	-	-	-	-	-	-	-
Process Feed Area Surge Hoppers	1.44	2.45E-04	2.45E-04	-	-	-	-	-	-	-
Truck Unloading Area	0.84	0.84	0.84	-	-	-	-	-	-	-
Fermentation Scrubber (CE005)	-	-	-	-	-	41.61	-	-	8.37	8.23
Fermentation Scrubber (CE010)	-	-	-	-	-	2.72	-	-	0.57	0.50
DDGS Dryers & TO/HSRG and Biomethanator Flare***	35.04	35.04	35.04	37.23	86.29	22.56	91.98	116,647	2.32	0.79
Ethanol Loadout and Flare	negl.	negl.	negl.	negl.	2.50	3.23	4.19	5,184	0.19	-
Fire Pump	0.07	0.17	0.17	0.04	1.29	0.19	0.43	86	0.28	0.06
Space Heaters	0.02	0.08	0.08	0.01	1.07	0.06	0.90	1,296	0.02	-
Boilers #1 and #2	*0.79*	*3.14*	*3.14*	*0.25*	*41.36*	*2.27*	*34.74*	*49,935*	*0.78*	-
Non-Fuel Grade Ethanol Loadout Skids & Flare	*negl.*	*negl.*	*negl.*	*negl.*	*2.31*	*0.22*	*3.87*	*5,184*	*0.09*	-
Total PTE of Entire Source	**126.31**	**78.79**	**66.86**	**37.52**	**134.82**	**79.68**	**139.11**	**178,333**	**13.15**	**9.91**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO_2e	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000 CO_2e	N/A	N/A

negl. = negligible
*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM_{10}), not particulate matter (PM), is considered as a "regulated air pollutant".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.
(1) Worst HAP is Acetaldehyde.
Units being added as part of the included modification.

*** The biomethanator flare only operates when the DDGS dryers are down. The operation of the DDGS dryers is the worst case scenario for emissions.

(a) This existing source is not a major stationary source for PSD (326 IAC 2-2) because the emissions of each regulated pollutant, excluding GHGs, are less than two hundred fifty (<250) tons per year, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1), and the source has not undertaken a physical change

or change in the method of operation on or after July 1, 2011 that resulted in an emissions increase of seventy-five thousand (75,000) tpy CO_2e or more.

(b) On July 20, 2011, U.S. EPA issued a deferral of biogenic CO_2 emissions from PSD and Title V. Therefore, these CO_2 emissions were not included in the listed GHG emissions.

Federal Rule Applicability

CAM:

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing pollutant-specific emission unit that meets the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the 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 existing emission unit and specified pollutant subject to CAM:

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Grain Receiving and Handling (EU001 – EU007, EU064): PM	Baghouse CE001	Y	> 100	< 100	100	Y	N
Grain Receiving and Handling (EU001 – EU007, EU064): $PM_{10}/PM_{2.5}$	Baghouse CE001	Y	> 100	< 100	100	Y	N
Hammermills (EU010, EU011, EU067): PM	Baghouse CE003	Y	> 100	< 100	100	Y	N
Hammermills (EU010, EU011, EU067): $PM_{10}/PM_{2.5}$	Baghouse CE003	Y	> 100	< 100	100	Y	N
DDGS Handling & Loadout (EU040 – EU043): PM	Baghouse CE008	Y	< 100	---	100	N	---
DDGS Handling & Loadout (EU040 – EU043): $PM_{10}/PM_{2.5}$	Baghouse CE008	Y	< 100	---	100	N	---
DDGS Cooler (EU036): PM	Baghouse CE014	Y	< 250	---	100	N	---
DDGS Cooler (EU036): $PM_{10}/PM_{2.5}$	Baghouse CE014	Y	> 100	< 100	100	Y	N
Truck & Railcar Unloading Areas (EU070 & EU073) & Storage Bins (EU076 & EU077): PM	Baghouse CE015	Y*	---	---	100	N	---

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Fork Truck Unloading Area (EU075): PM	Baghouse CE016	Y*	---	---	100	N	---
Process Feed Area Surge Hoppers (EU078 & EU079): PM	Baghouse CE017	Y*	---	---	100	N	---
Truck Unloading Area (EU080): PM	Baghouse CE018	Y*	---	---	100	N	---
Fermentation Process (EU016 - EU020): VOC	CO_2 Wet Scrubber CE005	Y	> 100	< 100	100	Y	N
Fermentation Process (EU016 - EU020): Acetaldehyde	CO_2 Wet Scrubber CE005	Y	< 10	---	10	N	---
Fermentation Process (EU016 - EU020): Total HAPs	CO_2 Wet Scrubber CE005	Y	< 25	---	25	N	---
Fermentation Process (EU016 - EU020): VOC	CO_2 Wet Scrubber CE010	Y	< 100	---	100	N	---
Fermentation Process (EU016 - EU020): Acetaldehyde	CO_2 Wet Scrubber CE010	Y	< 10	---	10	N	---
Fermentation Process (EU016 - EU020): Total HAPs	CO_2 Wet Scrubber CE010	Y	< 25	---	25	N	---
DDGS Dryers (EU035 and EU056) & Distillation (various units): PM	TO/HSRG System CE007	Y	< 100	---	100	N	---
DDGS Dryers (EU035 and EU056) & Distillation (various units): $PM_{10}/PM_{2.5}$	TO/HSRG System CE007	Y	> 100	< 100	100	Y	N
DDGS Dryers (EU035 and EU056) & Distillation (various units): SO_2	TO/HSRG System CE007	Y	> 100	< 100	100	Y	N
DDGS Dryers (EU035 and EU056) & Distillation (various units): VOC	TO/HSRG System CE007	Y	> 100	< 100	100	Y	N
DDGS Dryers (EU035 and EU056) & Distillation (various units): CO	TO/HSRG System CE007	Y	> 100	< 100	100	Y	N
DDGS Dryers (EU035 and EU056) & Distillation (various units): NO_x	TO/HSRG System CE007	Y	< 100	---	100	N	---

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
DDGS Dryers (EU035 and EU056) & Distillation (various units): Acetaldehyde	TO/HSRG System CE007	Y	< 10	---	10	N	---
DDGS Dryers (EU035 and EU056) & Distillation (various units): Total HAPs	TO/HSRG System CE007	Y	> 25	< 25	25	Y	N
Ethanol Loadout (EU045A and EU045B): VOC	Enclosed Flare CE009	Y	> 100	< 100	100	Y	N
Ethanol Loadout (EU083 and EU084): VOC	Enclosed Flare CE019	Y	< 100	---	100	N	---

* Although a control device is present, it is not necessary in order for the emission unit to comply with the applicable emission limitations. Therefore, CAM is not applicable to this emission unit for this pollutant.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the following emission units upon issuance of the Title V Renewal:

- Grain Receiving and Handling (EU001 through EU007, EU064) for PM, PM_{10}, and $PM_{2.5}$;
- Hammermills (EU010, EU011, EU067) for PM, PM_{10}, and $PM_{2.5}$;
- DDGS Cooler (EU036) for PM_{10} and $PM_{2.5}$;
- Fermentation Process (EU016 through EU020) regarding Scrubber CE005 for VOC;
- DDGS Dryers (EU035 and EU056) & Distillation (EU014, EU015, EU021 through EU029, EU049 through EU055, EU058, EU059, EU068, EU069) for PM_{10}, $PM_{2.5}$, SO_2, VOC, CO, and total HAPs; and
- Ethanol Loadout (EU045A and EU045B) for VOC.

A CAM plan must be submitted as part of the Renewal application.

NSPS:

(b) The one (1) thermal oxidizer with heat recovery steam generator (TO/HRSG) system is subject to the requirements of the Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60.40b, Subpart Db, which is incorporated by reference as 326 IAC 12, because it was constructed after June 19, 1984 and has a maximum heat input capacity greater than 100 MMBtu/hr.

The facilities subject to this rule include the following:

(1) One (1) thermal oxidizer with heat recovery steam generator (TO/HRSG) system, identified as CE007, constructed in 2006, with a maximum heat input capacity of 135 MMBtu/hr, using natural gas and process waste gases from the DDGS dryers as fuels, with emissions exhausted through stack EP007.

Under 40 CFR 60, Subpart Db, CE007 is an affected facility.

The entire rule has been included as Attachment B to the permit. This facility is subject to the following portions of 40 CFR 60, Subpart Db:

(1) 40 CFR 60.40b(a), (g);
(2) 40 CFR 60.41b;
(3) 40 CFR 60.42b(k)(2);
(4) 40 CFR 60.44b(a)(1), (c), (e), (f), (h), (i), (l)(1), (l)(2);
(5) 40 CFR 60.46b(c), (e)(1), (e)(4), (f);
(6) 40 CFR 60.48b(j)(2); and
(7) 40 CFR 60.49b(a), (b), (d)(1), (g), (o), (w).

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12, applies to CE007 except as otherwise specified in 40 CFR 60, Subpart Db.

(c) The two (2) natural gas fired boilers are subject to the requirements of the Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60.40c, Subpart Dc, which is incorporated by reference as 326 IAC 12, because each boiler will beconstructed after June 19, 1984 and has a maximum heat input capacity greater than 10 MMBtu/hr and less than 100 MMBtu/hr.

The facilities subject to this rule include the following:

(1) Two (2) natural gas fired boilers, identified as Boiler #1 (EU081) and Boiler #2 (EU082), each with a maximum heat input rate of 48.16 MMBtu/hr, exhausting uncontrolled to stacks EP020 and EP021, respectively.

Under 40 CFR 60, Subpart Dc, EU081 and EU082 are affected facilities.

The entire rule has been included as Attachment G to the permit. This facility is subject to the following portions of 40 CFR 60, Subpart Dc:

(1) 40 CFR 60.40c(a), (b), (c), (d);
(2) 40 CFR 60.41c; and
(3) 40 CFR 60.48c(a), (f)(4), (g), (i), (j).

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12, applies to EU081 and EU082 except as otherwise specified in 40 CFR 60, Subpart Dc.

(d) Tanks T001 through T005 and Tanks T013 through T017 are subject to the New Source Performance Standards for Volatile Organic Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (40 CFR 60, Subpart Kb) because they each have capacities greater than 75 cubic meters (19,813 gallons) and will be used to store volatile organic liquids.

The facilities subject to this rule include the following:

(1) One (1) 190 proof tank, identified as T001, constructed in 2006, with a maximum capacity of 100,000 gallons.

Under 40 CFR 60, Subpart Kb, T001 is an affected facility.

(2) One (1) 200 proof tank, identified as T002, constructed in 2006, with a maximum

capacity of 100,000 gallons.

Under 40 CFR 60, Subpart Kb, T002 is an affected facility.

(3) One (1) denaturant tank, identified as T003, constructed in 2006, with a maximum capacity of 100,000 gallons. [326 IAC 8-4-3]

Under 40 CFR 60, Subpart Kb, T003 is an affected facility.

(4) Two (2) denatured ethanol tanks, identified as T004 and T005, constructed in 2006, each with a maximum capacity of 750,000 gallons.

Under 40 CFR 60, Subpart Kb, T004 and T005 are affected facilities
.

(5) Two (2) liquid storage tanks, identified as T013 and T014, each with a maximum capacity of 500,000 gallons.

Under 40 CFR 60, Subpart Kb, T013 and T014 are affected facilities.

(6) Three (3) liquid storage tanks, identified as T015, T016, and T017, each with a maximum capacity of 24,000 gallons.

Under 40 CFR 60, Subpart Kb, T015, T016, and T017 are affected facilities.

The entire rule has been included as Attachment D to the permit. These facilities are subject to the following portions of 40 CFR 60, Subpart Kb:

(1) 40 CFR 60.110b(a), (b), (d)(2), (d)(3), (d)(7), (d)(8), (e)(1)(i), (e)(2), (e)(3);
(2) 40 CFR 60.111b;
(3) 40 CFR 60.112b(a)(1);
(4) 40 CFR 60.113b(a);
(5) 40 CFR 60.115b(a);
(6) 40 CFR 60.116b(a), (b), (c), (e); and
(7) 40 CFR 60.117b.

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12, applies to the affect facilities except as otherwise specified in 40 CFR 60, Subpart Kb.

(e) Tanks T006, T007, T008, T009, T010, T011, and T012 are not subject to the requirements of the New Source Performance Standards for Volatile Organic Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (40 CFR 60, Subpart Kb) because they each have capacities less than 75 cubic meters (19,813 gallons). Therefore, the requirements of the NSPS are not included in the permit for these units.

(f) This source is not subject to the requirements of the New Source Performance Standards for Grain Elevators (40 CFR 60.300, Subpart DD) because the source does not have a grain elevator with a permanent storage capacity greater than 2.5 million bushels. The source has a permitted storage capacity of 1.9 million bushels as follows:

1) One (1) grain handling operation, constructed in 2006, controlled by baghouse CE001, exhausting through stack EP001, and consisting of the following:

(A) Two (2) corn storage bins, identified as EU004 and EU005, each with a

maximum capacity of 200,000 bushels and maximum throughput rate of 420 tons per hour.

(B) One (1) corn storage bin, identified as EU064, (constructed in 2008) with a maximum capacity of 750,000 bushels and maximum throughput rate of 420 tons per hour.

(2) One (1) corn storage bin, identified as EU066, approved for construction in 2010, with a maximum capacity of 750,000 bushels and a maximum throughput rate of 420 tons per hour, utilizing no control devices, and exhausting to the atmosphere.

Therefore, the requirements of the NSPS are not included in the permit.

(g) Ethanol is one of the chemicals listed in 40 CFR 60.489. Therefore, this ethanol production plant is subject to the requirements of Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 (40 CFR 60.480a, Subpart VVa). By complying with the provisions of NSPS VVa, the source is satisfying the requirements of NSPS VV for those affected units for which construction, reconstruction, or modification commenced after January 5, 1981, and on or before November 7, 2006.

The facilities subject to this rule include the following:

(1) One (1) fermentation process, constructed in 2006, with a maximum throughput rate of 7,060 gallons of ethanol per hour, controlled by CO_2 wet scrubbers CE005 (vented to stack EP005) and CE010 (vented to stack EP010), and consisting of the following:

(A) Four (4) fermenters, identified as EU016, EU017, EU018, and EU019.

(B) One (1) beer well, identified as EU020.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(2) One (1) distillation process, constructed in 2006, with a maximum throughput rate of 6,850 gallons of ethanol per hour, controlled by TO/HRSG system CE007, exhausting through stack EP007, and consisting of the following:

(A) Two (2) slurry mixers, identified as EU049 and EU058.

(B) One (1) slurry tank, identified as EU050.

(C) Three (3) liquefaction tanks, identified as EU014, EU051, and EU059, each with a maximum capacity of 7,000 gallons per hour.

(D) One (1) cook tube, identified as EU052.

(E) One (1) flash tank, identified as EU053.

(F) One (1) yeast tank, identified as EU015.

(G) One (1) 190 proof condenser, identified as EU054.

(H) One (1) 200 proof condenser, identified as EU055.

(I) One (1) beer stripper, identified as EU021.

(J) One (1) side stripper, identified as EU022.

(K) One (1) rectifier, identified as EU023.

(L) Molecular sieve units, identified as EU024.

(M) Eight (8) evaporators, identified as EU025.

(N) Four (4) centrifuges, identified as EU026 through EU029.

(O) One (1) slurry tank, identified as EU068, approved for construction in 2010.

(P) One (1) centrifuge, identified as EU069, approved for construction in 2010.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(3) One (1) ethanol loading rack for trucks, identified as EU045A, constructed in 2006, with a maximum throughput rate of 800 gallons per minute. The truck loading process is controlled by the enclosed flare CE009, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP009.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(4) One (1) ethanol loading rack for railcars, identified as EU045B, constructed in 2006, with a maximum throughput rate of 1000 gallons per minute. The railcar loading process is controlled by the enclosed flare CE009, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP009.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(5) One (1) distillation process, approved in 2013 for construction, with a maximum throughput rate of 40,000 gallons of non-fuel grade ethanol per hour, consisting of the following:

(1) Three (3) distillation columns and seven (7) condensers operating in a close loop.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(6) One (1) non-fuel grade ethanol loading skid for trucks, identified as EU083, approved in 2013 for construction, with a maximum throughput rate of 1000 gallons per minute. The truck loading process is controlled by the enclosed flare CE019, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP019.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(7) One (1) non-fuel grade ethanol loading skid for railcars, identified as EU084, approved in 2013 for construction, with a maximum throughput rate of 1667 gallons per minute. The railcar loading process is controlled by the enclosed flare CE019, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP019.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

The entire rule has been included as Attachment C to the permit. These facilities are subject to the following portions of 40 CFR 60, Subpart VVa:

(1) 40 CFR 60.480a(a), (b), (c), (d);
(2) 40 CFR 60.481a;
(3) 40 CFR 60.482-1a;
(4) 40 CFR 60.482-2a;
(5) 40 CFR 60.482-3a;
(6) 40 CFR 60.482-4a;
(7) 40 CFR 60.482-5a;
(8) 40 CFR 60.482-6a;
(9) 40 CFR 60.482-7a;
(10) 40 CFR 60.482-8a;
(11) 40 CFR 60.482-9a;
(12) 40 CFR 60.482-10a;
(13) 40 CFR 60.482-11a;
(14) 40 CFR 60.483-1a;
(15) 40 CFR 60.483-2a;
(16) 40 CFR 60.484a;
(17) 40 CFR 60.485a;
(18) 40 CFR 60.486a;
(19) 40 CFR 60.487a;
(20) 40 CFR 60.488a; and
(21) 40 CFR 60.489a.

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12, applies to the affected facilities except as otherwise specified in 40 CFR 60, Subpart VVa.

(h) This source is not subject to the requirements of the New Source Performance Standard for Bulk Gasoline Terminals (40 CFR 60.500, Subpart XX) because this source does not operate a bulk gasoline terminal as defined in 40 CFR 60.501. Therefore, the requirements of the NSPS are not included in the permit.

(i) This source is not subject to the requirements of the New Source Performance Standard

for Volatile Organic Liquid Storage Vessels VOC Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes (40 CFR 60, Subpart III) because this source does not utilize air oxidation unit processes as defined in 40 CFR 60.611. Therefore, the requirements of the NSPS are not included in the permit.

(j) This source is not subject to the requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels VOC Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations (40 CFR 60, Subpart NNN). Ethanol is one of the chemicals listed in 40 CFR 60.667. However, according to the EPA memorandum from Mr. George T. Czerniak dated December 6, 2002, the manufacture of ethanol using a fermentation process (biological synthesis) was excluded from the scope of NSPS, Subpart NNN. Therefore, the requirements of the NSPS are not included in the permit.

(k) This source is not subject to the requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels VOC Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes (40 CFR 60, Subpart RRR) because this source does not utilize reactor processes as defined in 40 CFR 60.701. Therefore, the requirements of the NSPS are not included in the permit.

(l) The emergency diesel fire pump, identified as EU034, is not subject to the requirements of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII) because the construction date of the fire pump engine predates the applicability requirements as specified in 40 CFR 60.4200. Therefore, the requirements of the NSPS are not included in the permit.

(m) The emergency diesel fire pump, identified as EU034, is not subject to the requirements of the Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40 CFR 60.4230, Subpart JJJJ) because the emergency fire pump utilizes a compression ignition internal combustion engine. Therefore, the requirements of the NSPS are not included in the permit.

NESHAP:

(n) The requirements of the following NESHAPs under 40 CFR Part 63 are not included in the permit:

- NESHAP from the Synthetic Organic Chemical Manufacturing Industry (40 CFR 63.100, Subpart F);
- NESHAP from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater (40 CFR 63.110, Subpart G); and
- NESHAP for Equipment Leaks (40 CFR 63.160, Subpart H).

To be subject to the requirements of these NESHAPs, this source must consist of chemical manufacturing process units that meet all of the criteria in 40 CFR 63.100(b)(1), (b)(2), and (b)(3). Since this source only produces ethanol, which is not one of the chemicals listed in Table 1 of 40 CFR 63, Subpart F or listed in 40 CFR 63.100(b)(1)(i) and (b)(1)(ii), this source is not subject to the requirements of these NESHAPs.

(o) This source is not subject to the requirements of the National Emission Standards for Organic Hazardous Air Pollutants for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks (40 CFR 63.190, Subpart I) because this source does not manufacture any of the materials listed in 40 CFR 63.190(b)(1) through (b)(6). Therefore, the requirements of the NESHAP are not included in the permit.

(p) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers (40 CFR 63.400, Subpart Q) because the cooling towers at this source do not utilize chromium-based water treatment chemicals. Therefore, the requirements of the NESHAP are not included in the permit.

(q) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations) (40 CFR 63.420, Subpart R) because this source does not operate a bulk gasoline terminal as defined in 40 CFR 63.421 since it does not receive gasoline by pipeline, ship, or barge. Therefore, the requirements of the NESHAP are not included in the permit.

(r) This source is not subject to the requirements of the National Emissions Standards for Tanks - Level 1 (40 CFR 63.900, Subpart OO) because there are no subparts of 40 CFR 60, 61, or 63 applicable to this source that reference Subpart OO. Therefore, the requirements of the NESHAP are not included in the permit.

(s) This source is not subject to the requirements of the National Emissions Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process (40 CFR 63.980, Subpart SS) because there are no subparts of 40 CFR 60, 61, or 63 applicable to this source that reference Subpart SS. Therefore, the requirements of the NESHAP are not included in the permit.

(t) This source is not subject to the requirements of the National Emissions Standards for Equipment Leaks - Control Level 1 (40 CFR 63.1000, Subpart TT) because there are no subparts of 40 CFR 60, 61, or 63 applicable to this source that reference Subpart TT. Therefore, the requirements of the NESHAP are not included in the permit.

(u) This source is not subject to the requirements of the National Emissions Standards for Equipment Leaks - Control Level 2 (40 CFR 63.1019, Subpart UU) because there are no subparts of 40 CFR 60, 61, or 63 applicable to this source that reference Subpart UU. Therefore, the requirements of the NESHAP are not included in the permit.

(v) This source is not subject to the requirements of the National Emissions Standards for Storage Vessels (Tanks) - Control Level 2 (40 CFR 63.1060, Subpart WW) because there are no subparts of 40 CFR 60, 61, or 63 applicable to this source that reference Subpart UU. Therefore, the requirements of the NESHAP are not included in the permit.

(w) The requirements of the following NESHAPs under 40 CFR Part 63 are not included in the permit:

- National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) (40 CFR Part 63.2330, Subpart EEEE);
- National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing (40 CFR 63.2430, Subpart FFFF); and
- National Emission Standards for Hazardous Air Pollutants for Industrial/Commercial/Institutional Boilers and Process Heaters (40 CFR 63.7480, Subpart DDDDD).

These NESHAPs apply only to major sources of hazardous air pollutants. Since the limited potential to emit of any single HAP is less than 10 tons per year and the limited potential to emit of all combined HAPs is less than 25 tons per year, Central Indiana

Ethanol, LLC is an area source of HAPs. Therefore, the requirements of these NESHAPs are not included in the permit.

(x) The emergency diesel fire pump, identified as EU034, is subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ), which is incorporated by reference as 326 IAC 20-82, because the source operates a stationary reciprocating internal combustion engine (RICE) at an area source of HAP emissions. The units subject to this rule include the following:

(1) Stationary fire pumps, including one (1) emergency diesel fire pump, identified as EU034, constructed in 2006, with a maximum power rating of 350 horsepower, and exhausting to stack EP006.

Under 40 CFR Part 63, Subpart ZZZZ, EU034 is an affected unit.

The entire rule has been included as Attachment E to the permit. These units are subject to the following portions of 40 CFR 63, Subpart ZZZZ:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a), (c), (d);
(3) 40 CFR 63.6590(a)(1)(iii), (a)(1)(iv), (b)(3);
(4) 40 CFR 63.6605;
(5) 40 CFR 63.6625(e), (f);
(6) 40 CFR 63.6645(a)(5);
(7) 40 CFR 63.6665;
(8) 40 CFR 63.6670; and
(9) 40 CFR 63.6675.

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, applies to EU034 except as otherwise specified in 40 CFR 63, Subpart ZZZZ.

(y) The requirements of National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities, 40 CFR 63, Subpart BBBBBB are not included as follows:

(1) The liquids in Tanks T001, T002, T003, T006, T007, T009, and T010 have a Reid vapor pressure of less than 27.6 kPa. Therefore, these liquids do not meet the definition of gasoline, pursuant to 40 CFR 63.11100.

(2) According to the Federal Register, Vol 76, No. 15 page 4173, "denatured ethanol does not meet the definition of 'gasoline'" and "tanks storing denatured ethanol are not 'gasoline storage tanks,' and therefore not subject to subpart BBBBBB." Therefore, Tanks T004 and T005 are not subject to this rule.

(3) Pursuant to 40 CFR 63.11081(c), gasoline storage tanks that are used only for dispensing gasoline in a manner consistent with tanks located at a gasoline dispensing facility, as defined in 40 CFR 63.11132, are not subject to any of the requirements in this subpart. Therefore, Tank T008 is not subject to this rule.

(z) This source is subject to the National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities (40 CFR Part 63, Subpart CCCCCC). The units subject to this rule include the following:

Insignificant Activities

(k) Other emission units, not regulated by a NESHAP, with PM10, NOx, and SO_2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(7) One (1) gasoline storage tank, identified as T008, approved for construction in 2010, with a maximum capacity of 350 gallons of gasoline, and exhausting to the atmosphere.

Under 40 CFR 63, Subpart CCCCCC, T008 is an affected facility.

The entire rule is included as Attachment F of the permit. This gasoline storage tank is subject to the following portions of Subpart CCCCCC.

(1) 40 CFR 63.11110;
(2) 40 CFR 63.11111(a), (b), (e), (h), (i), (j);
(3) 40 CFR 63.11112(a), (d);
(4) 40 CFR 63.11113(b), (c);
(5) 40 CFR 63.11115;
(6) 40 CFR 63.11116;
(7) 40 CFR 63.11125(d);
(8) 40 CFR 63.11126(b);
(9) 40 CFR 63.11130;
(10) 40 CFR 63.11131; and
(11) 40 CFR 63.11132.

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63, Subpart CCCCCC.

(aa) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63.11193, Subpart JJJJJJ (326 IAC 20-1), are not included in the permit because the heat recovery steam generator, identified as part of CE007, meets the definition of a waste heat boiler, as defined by 40 CFR 63.11237, and is specifically excluded from the definition of a boiler, as defined by 40 CFR 63.11237.

(bb) The requirements of the National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources, 40 CFR 63.11494, Subpart VVVVVV, are not included in the permit since this source does not have any Table 1 HAPs present in feedstocks, or Table 1 HAPs that are generated or produced in Chemical Manufacturing Process Units (CMPU) and are present in process fluid at concentrations greater than 0.1 percent for carcinogens, as defined by the Occupational Safety and Health Administration at 29 CFR 1910.1200(d)(4), or greater than 1.0 percent for non-carcinogens.

The source has submitted an applicability determination for NESHAP Subpart VVVVVV which documents an engineering firm's review of the following: (1) the chemical and physical properties of acetaldehyde and (2) the source's process conditions to estimate

the concentration of acetaldehyde in their chemical manufacturing process. The results of the analysis indicate that the concentration of acetaldehyde is significantly less than the applicability threshold.

(cc) The requirements of the National Emission Standards for Hazardous Air Pollutants for Area Sources: Chemical Preparations Industry, 40 CFR 63.11579, Subpart BBBBBBB, are not included in the permit, since this source does not operate a chemical preparations facility as defined in 40 CFR 63.11588.

State Rule Applicability - Entire Source

326 IAC 2-2 (PSD)

The source was approved for construction in 2006, and the source is not one of the twenty-eight (28) source categories as defined in 326 IAC 2-2-1.

Due to the Tailoring Rule, the source must transition from their existing FESOP to a Part 70 Operating Permit. The synthetic minor limits, previously required by the FESOP to avoid Part 70 requirements, do not have a regulatory basis for being in the operating permit as the source is now subject to Part 70 because of the source's potential to emit GHGs.

The FESOP limits also served as PSD synthetic minor limits keeping the source minor under 326 IAC 2-2 (PSD). The unlimited PTE of the source for PM, PM_{10}, $PM_{2.5}$, VOC, and CO is greater than the PSD major source thresholds of 250 tons per year. The source has elected to take synthetic minor limits to remain a minor source under 326 IAC 2-2 (PSD).

PM, PM_{10}, and $PM_{2.5}$ PSD Minor Limits

(a) The particulate emissions from the grain receiving and handling, hammermills, DDGS handling and loadout, and DDGS cooler shall not exceed the emission limits listed in the table below:

Unit ID	Unit Description	Stack ID	PM Emission Limit (lb/hr)	PM_{10} Emission Limit (lb/hr)	$PM_{2.5}$ Emission Limit (lb/hr)
EU001 - EU007, EU0064	Grain Receiving and Handling	EP001	1.67	1.67	1.67
EU010, EU011, EU067	Hammermills	EP003	1.20	1.20	1.20
EU040 - EU043	DDGS Handling and Loadout	EP008	0.16	0.16	0.16
EU036	DDGS Cooler	EP014	0.94	0.94	0.94
EU075	Fork Truck Unloading Area	EP016	0.64	0.64	0.64

(b) The particulate emissions from the TO/HRSG System CE007, which is used to control the DDGS dryers (EU035 and EU056) and the distillation process, shall not exceed 8.0 lb/hr for PM, 8.0 lb/hr for PM_{10}, and 8.0 lb/hr for $PM_{2.5}$.

The PM, PM_{10}, and $PM_{2.5}$ emissions from the entire source are limited to less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 (PSD) are not rendered not applicable.

VOC PSD Minor Limits

(a) The VOC emissions from wet scrubber CE005, which is used to control emissions from the fermentation process, shall not exceed 9.5 lb/hr.

(b) The VOC emissions from wet scrubber CE010, which is used to control emissions from the fermentation process, shall not exceed 0.62 lb/hr.

(c) The VOC emissions from the TO/HRSG System CE007, which is used to control the DDGS dryers (EU035 and EU056) and the distillation process, shall not exceed 5.15 lb/hr.

(d) The total DDGS produced at DDGS cooler EU036 shall not exceed 210,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month, and VOC emissions from DDGS cooler EU036 shall not exceed 0.065 pounds per ton of DDGS produced.

(e) The total combined denatured ethanol and blended ethanol load-out from loading racks EU045A and EU045B shall not exceed 64,900,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(f) The total denaturant used at the loading racks EU045A and EU045B shall not exceed 4,900,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(g) The blended ethanol shall not exceed a blend of 30% gasoline.

(h) The total combined non-fuel grade ethanol load-out from loading skids EU083 and EU084 shall not exceed 60,000,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

The VOC emissions from the entire source are limited to less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 (PSD) are rendered not applicable.

CO PSD Minor Limits

(a) The CO emissions from the TO/HRSG System CE007, which is used to control the DDGS dryers (EU035 and EU056) and the distillation process, shall not exceed 21.0 lb/hr.

(b) CO emissions from flare CE009, controlling ethanol loading racks EU045A and EU045B, shall not exceed 0.129 lb/kgal.

(c) The operating hours for the emergency diesel fire pump (EU034) shall not exceed 500 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

(d) The biomethanator flare (CE013) shall not operate when any of the DDGS dryers (EU035 and EU056) are in operation.

(e) CO emissions from flare CE019, controlling ethanol loading skids EU083 and EU084, shall not exceed 0.129 lb/kgal.

The CO emissions from the entire source are limited to less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 (PSD) are rendered not applicable.

SO_2 PSD Minor Limits

(a) The SO_2 emissions from the TO/HRSG System CE007, which is used to control the DDGS dryers (EU035 and EU056) and the distillation process, shall not exceed 8.5 lb/hr.

The SO_2 emissions from the entire source are limited to less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 (PSD) are rendered not applicable.

NO_x PSD Minor Limits

(a) NO_x emissions from flare CE019, controlling ethanol loading skids EU083 and EU084, shall not exceed 0.077 lb/kgal.

(b) NO_x emissions from flare CE009, controlling ethanol loading racks EU045A and EU045B, shall not exceed 0.077 lb/kgal.

(c) The operating hours for the emergency diesel fire pump (EU034) shall not exceed 500 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

(d) The biomethanator flare (CE013) shall not operate when any of the DDGS dryers (EU035 and EU056) are in operation.

(e) The NO_x emissions from the TO/HRSG System CE007, which is used to control the DDGS dryers (EU035 and EU056) and the distillation process, shall not exceed 19.7 lb/hr.

The NO_x emissions from the entire source are limited to less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 (PSD) are rendered not applicable

326 IAC 2-6 (Emission Reporting)
This source, not located in Lake, Porter, or LaPorte County, is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7 (Part 70). The potential to emit of VOC and PM_{10} is less than 250 tons per year, each, and the potential to emit of CO, NO_x, and SO_2 is less than 2,500 tons per year, each. Therefore, pursuant to 326 IAC 2-6-3(a)(2), triennial reporting is required. An emission statement shall be submitted in accordance with the compliance schedule in 326 IAC 2-6-3 by July 1, 2014, and every three (3) years thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1).

326 IAC 6-4 (Fugitive Dust Emissions)
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 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is subject to the requirements of 326 IAC 6-5 because the source has potential fugitive particulate emissions greater than 25 tons per year. Pursuant to 326 IAC 6-5, fugitive particulate matter emissions shall be controlled according to the attached Fugitive Dust Control Plan in Attachment A.

326 IAC 6.5 (PM Limitations Except Lake County)
This source is not subject to 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne.

326 IAC 8-4-4 (Bulk Gasoline Terminals)
The end product that the source delivers to bulk gasoline plants or to commercial or retail accounts primarily by transport is not a petroleum distillate and therefore does not meet the definition of gasoline pursuant to 326 IAC 1-2-32.

326 IAC 8-4-5 (Bulk Gasoline Plants)
The gasoline received by the source is blended with ethanol as a denaturant or as an additive to make E85 fuel. The source does not receive gasoline from bulk terminals by transport, store it in tanks, and subsequently dispense it via account trucks to local farms, businesses, and service stations. Therefore, the source does not meet the definition of a bulk gasoline plant pursuant to 326 IAC 1-2-7.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
This source is located in Grant County. Therefore, the requirements of 326 IAC 8-9 are not applicable.

326 IAC 9-1 (Carbon Monoxide Emission Limits)
Although this is a stationary source of CO emissions commencing operation after March 21, 1972, there are no applicable CO emission limits for this type of source pursuant to 326 IAC 9-1-2. Therefore, 326 IAC 9-1 does not apply.

326 IAC 10-1 (Nitrogen Oxide Emission Limitations)
The plant is not subject to the requirements of 326 IAC 10-1 (Nitrogen Oxide Emission Limitations) because the plant is not located in Clark County or Floyd County.

State Rule Applicability – Individual Facilities

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

(a) The operation of the DDGS dryers (EU035 and EU056) & TO/HSRG (EU014, EU015, EU021 through EU029, EU049 through EU055, EU058, EU059, EU068, EU069) will emit 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. However, the source has elected to comply with the following limits in order for the requirements of 326 IAC 2-4.1 to not be applicable to them:

(1) Acetaldehyde emissions shall not exceed 0.18 lbs/hr.

(2) Total HAP emissions shall not exceed 0.53 lbs/hr.

Therefore, the requirements of 326 IAC 2-4.1 are not included in the permit.

(b) The operation of the DDGS Cooler (EU036), which is controlled by baghouse CE014, will emit 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. However, the source has elected to comply with the following limits in order for the requirements of 326 IAC 2-4.1 to not be applicable to them:

(1) Acetaldehyde emissions shall not exceed 0.075 lbs/hr.

Therefore, the requirements of 326 IAC 2-4.1 are not included in the permit.

(c) The emissions from the fermentation process will emit 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. However, the source has elected to comply with the following limits in order for the requirements of 326 IAC 2-4.1 to not be applicable to them:

(1) Acetaldehyde emissions from CE005, which is used to control the emissions from the fermentation process, shall not exceed 1.88 lbs/hr.

(2) Total HAP emissions from CE005, which is used to control the emissions from the fermentation process, shall not exceed 1.91 lbs/hr.

(3) Acetaldehyde emissions from CE010, which is used to control the emissions from the fermentation process, shall not exceed 0.114 lbs/hr.

(4) Total HAP emissions from CE010, which is used to control the emissions from the fermentation process, shall not exceed 0.13 lbs/hr.

Therefore, the requirements of 326 IAC 2-4.1 are not included in the permit.

(d) The operation of the ethanol loading rack for trucks (EU045A) and the ethanol loading rack for railcars (EU045B) will emit 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. However, the source has elected to comply with the following limits in order for the requirements of 326 IAC 2-4.1 to not be applicable to them:

(1) The total combined denatured ethanol and blended ethanol load-out from loading racks EU045A and EU045B shall not exceed 64,900,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(2) The total denaturant used at the loading racks EU045A and EU045B shall not exceed 4,900,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(3) The blended ethanol shall not exceed a blend of 30% gasoline.

(4) The VOC emissions from the ethanol loading rack for trucks (EU045A) shall be collected and controlled by enclosed flare CE009.

(5) The VOC emissions from the ethanol loading rack for railcars (EU045B) shall be collected and controlled by enclosed flare CE009.

(6) The overall efficiency for the enclosed flare CE009 (including the capture efficiency and destruction efficiency) shall be at least 98%.

Therefore, the requirements of 326 IAC 2-4.1 are not included in the permit.

(e) With the addition of the proposed modification, Central Indiana Ethanol, LLC would have potential to emit total HAPs greater than 25 tons per year, making Central Indiana Ethanol, LLC a major source of HAPs. Central Indiana Ethanol, LLC has elected to comply with the following limits in order for the source to meet the definition of an "area source":

(1) The potential emissions of cumulative HAPs shall be limited to no more than 3.85 tons per year from Tanks T013 through T017 and shall be limited to any single HAP or combination of these HAPs: benzene, chloroform, dimethyl phthalate, methyl isobutyl ketone, and toluene.

(2) The total combined non-fuel grade ethanol load-out from loading skids EU083 and EU084 shall not exceed 60,000,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these HAP limits, combined with the potential to emit HAP from other emission units at the source, shall limit the HAP emissions from the entire source to less than 10 tons per twelve (12) consecutive month period for a single HAP and less than 25 tons per twelve (12) consecutive month period for total HAPs. Therefore, the requirements of 326 IAC 2-4.1 are not included in the

permit.

(f) The operation of all of the remaining emission units 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, each. Therefore, 326 IAC 2-4.1 does not apply to these units.

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)

(a) The TO/HRSG system (CE007), with a maximum heat capacity of 135 MMBtu/hr, is subject to 326 IAC 6-2-4 because it was constructed after September 21, 1983.

Pursuant to 326 IAC 6-2-4(a), the particulate matter (PM) emissions from the boiler shall not exceed the pound per million Btu limit calculated using the following equation:

$Pt = 1.09/Q^{0.26}$

Where:
Pt = Pounds of particulate matter emitted per MMBtu heat input
Q = Total source maximum operating capacity rating in MMBtu/hr heat input
(Q = 135 MMBtu/hr)

Pt = 0.30 lb/MMBtu.

The AP-42 emission factor for filterable PM from natural gas combustion is 1.9 lb/MMCF, which is equivalent to 0.00186 lb/MMBtu assuming natural gas has a heating value of 1,020 MMBtu/MMCF. Therefore, the TO/HRSG system (CE007) is capable of complying with this rule.

(b) The two (2) natural gas fired boilers, identified as Boiler #1 (EU035) and Boiler #2 (EU056), each with a maximum heat capacity of 48.16 MMBtu/hr, are subject to 326 IAC 6-2-4 because they will be constructed after September 21, 1983.

Pursuant to 326 IAC 6-2-4(a), the particulate matter (PM) emissions from each boiler shall not exceed the pound per million Btu limit calculated using the following equation:

$Pt = 1.09/Q^{0.26}$

Where:
Pt = Pounds of particulate matter emitted per MMBtu heat input
Q = Total source maximum operating capacity rating in MMBtu/hr heat input
(Q = 135 + 48.16 + 48.16 = 231.32 MMBtu/hr)

Pt = 0.26 lb/MMBtu.

The AP-42 emission factor for filterable PM from natural gas combustion is 1.9 lb/MMCF, which is equivalent to 0.00186 lb/MMBtu assuming natural gas has a heating value of 1,020 MMBtu/MMCF. Therefore, each of the boilers is capable of complying with this rule.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

(a) Pursuant to 326 IAC 6-3-2, particulate emissions from each of following operations shall not exceed the pound per hour limit listed in the table below:

Unit ID	Unit Description	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lb/hr)
EU001	Three (3) Corn Dump Pits	420	66.89

Unit ID	Unit Description	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lb/hr)
EU002	Corn Conveyor	420	66.89
EU003	Corn Elevator	420	66.89
EU004	Corn Storage Bin	420	66.89
EU005	Corn Storage Bin	420	66.89
EU064	Corn Storage Bin	420	66.89
EU066	Corn Storage Bin	420	66.89
EU006	Scalper	140	54.72
EU007	Surge Bin	140	54.72
EU010	Hammermill	140	54.72
EU011	Hammermill	140	54.72
EU067	Hammermill	140	54.72
EU040	DDGS Dump Pit	101	51.38
EU041	DDGS Elevator	101	51.38
EU042	DDGS Conveyor	101	51.38
EU043	DDGS Load Spout	101	51.38
EU070	Truck Unloading Area	25	35.43
EU071 and EU072	Truck Unloading Conveyors	25	35.43
EU073	Railcar Unloading Area	25	35.43
EU074	Railcar Unloading Conveyor	25	35.43
EU075	Fork Truck Unloading Area	25	35.43
EU076 and EU077	Storage Bins	25	35.43
EU078 and EU079	Surge Hoppers	25	35.43
EU080	Truck Unloading Area	25	35.43
EU035	DDGS Dryer	34	41.1
EU056	DDGS Dryer	34	41.1
EU036	DDGS cooler	34	41.06

The pounds per hour limitations were calculated using 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

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

(b) Pursuant to 326 IAC 6-3-2(e)(3), when the process weight exceeds 200 tons per hour, the maximum allowable emission may exceed the emission limits shown in the table above, provided the concentration of particulate matter in the gas discharged to the atmosphere is less than 0.10 pounds per 1,000 pounds of gases.

(c) In order to comply with these limits:

(1) Baghouse CE001 shall be in operation at all times any emission units in Grain Receiving and Handling (EU001 through EU007, EU064) are in operation.

(2) Baghouse CE003 shall be in operation at all times any of the hammermills (EU010, EU011, EU067) are in operation.

(3) Baghouse CE014 shall be in operation at all times the DDGS cooler (EU036) is in operation.

(4) Each of these remaining emission units is capable of complying with the corresponding 326 IAC 6-3-2 limit without the use of controls.

(d) The non-fuel grade ethanol loading skids (EU083 and EU084) will have potential particulate emissions less than 0.551 pounds per hour. Therefore, pursuant to 326 IAC 6-3-1(b)(14), these units are not subject to the requirements of 326 IAC 6-3-2.

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations

(a) The potential to emit SO_2 from the DDGS Dryers & TO/HSRG are greater than twenty-five (25) tons per year or ten (10) pounds per hour. Therefore, the units are subject to the requirements of 326 IAC 7-1.1. However, these units do not combust coal or oil. Therefore, there are no applicable emission limits pursuant to 326 IAC 7-1.1-2. The source shall submit fuel analysis compliance reports upon request, pursuant to 326 IAC 7-2-1(c)(3).

(b) The SO_2 emissions from the entire source are less than ten thousand (10,000) tons per year. Therefore, the requirements of 326 IAC 7-3 are not applicable.

(c) The potential to emit SO_2 from each of the boilers is less than twenty-five (25) tons per year or ten (10) pounds per hour. Therefore, the units are not subject to the requirements of 326 IAC 7-1.1.

(d) Central Indiana Ethanol, LLC is located in Grant County. Therefore, the requirements of 326 IAC 7-4 are not applicable.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements (BACT))

(a) The potential VOC emissions from the following units are each greater than 25 tons per year:

- Fermentation (EU016 through EU020);
- Distillation (EU014, EU015, EU021 through EU029, EU049 through EU055, EU058, EU059, EU068, and EU069);
- DDGS dryers (EU035 and EU056); and
- Ethanol loadout operations (EU045A and EU045B).

However, the fermentation process, distillation process, DDGS dryers, and ethanol loadout operations at this source are subject to the requirements of 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills). Therefore, these operations are not subject to the requirements of 326 IAC 8-1-6 (BACT).

(b) 326 IAC 8-1-6 does not apply to the remaining units at this source since the potential VOC emissions from each emission unit are less than twenty-five (25) tons per year.

326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)

(a) The denaturant storage tank T003 has a maximum capacity greater than 39,000 gallons and will be used to store petroleum distillate which has a vapor pressure greater than 1.52 psi. Therefore, tank T003 is subject to the requirements of 326 IAC 8-4-3. Tank T003 will be equipped with an internal floating roof. Pursuant to 326 IAC 8-4-3(d), the Permittee shall maintain the following records for a period of two (2) years for tank T003:

(1) The types of volatile petroleum liquid stored;

(2) The maximum true vapor pressure of the liquids as stored; and

(3) The results of the inspections performed on the storage vessels.

The above records shall be made available to the IDEM, OAQ upon written request.

(b) Tanks T001 and T002 will not be used to store petroleum distillate; they will store ethanol distillates that are not based from petroleum. Therefore, these tanks are not subject to requirements of 326 IAC 8-4-3.

(c) Tanks T004 and T005 will not be used to store petroleum distillate whose true vapor pressure is greater than 10.5 kPa (1.52 psi); they will store denatured ethanol. Therefore, these tanks are not subject to requirements of 326 IAC 8-4-3.

(d) Tanks T006, T007, T008, T009, and T010 have individual storage capacities less than the applicability threshold of 39,000 gallons set forth in 326 IAC 8-4-3. Therefore, these tanks are not subject to requirements of 326 IAC 8-4-3.

(e) Tanks T013 and T014 will not be used to store petroleum distillate; they will store ethanol distillates that are not based from petroleum. Therefore, these tanks are not subject to requirements of 326 IAC 8-4-3.

(f) Tanks T015, T016, and T017 have individual storage capacities less than the applicability threshold of 39,000 gallons set forth in 326 IAC 8-4-3. Therefore, these tanks are not subject to requirements of 326 IAC 8-4-3.

326 IAC 8-4-6 (Gasoline Dispensing Facilities)

(a) The two (2) diesel storage tanks, identified as T007 and T009, do not meet the definition of a "gasoline dispensing facility" because, pursuant to 326 IAC 8-4-6(a)(8), diesel fuel is not considered to be a motor vehicle fuel. Therefore, the requirements of 326 IAC 8-4-6 are not applicable to these emission units.

(b) The gasoline storage tank, identified as T008, meets the definition of a gasoline dispensing facility, pursuant to 326 IAC 8-4-6(a)(8), because it has a capacity of 250 gallons or more. However, pursuant to 326 IAC 8-4-1(d), 326 IAC 8-4-6(a) and (b) apply to any gasoline storage tank at a gasoline dispensing facility with a monthly gasoline throughput of 10,000 gallons per month or greater. The source has elected to comply with the following limit in order for the requirements of 326 IAC 8-4-6(a) and (b) to not be applicable to them:

(1) The monthly gasoline throughput from the gasoline storage tank, identified as T008, shall not exceed 10,000 gallons per month.

Therefore, the requirements of 326 IAC 8-4-6(a) and (b) are not included in the permit.

(c) This source is not located in any of the following counties: Clark, Floyd, Lake, or Porter. Therefore, pursuant to 326 IAC 8-4-1(e), the requirements of 326 IAC 8-4-6(c) are not included in the permit.

326 IAC 8-4-9 (Leaks from Vapor Collection Systems)

Since the source has elected to limit the monthly gasoline throughput from the gasoline storage tank, identified as T008, in order for the requirements of 326 IAC 8-4-6(a) and (b) to not be applicable to them, the tank does not require a vapor collection system. Therefore, the

requirements of 326 IAC 8-4-9 are not included in the permit.

326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills)

(a) Pursuant to 326 IAC 8-5-6, the Permittee shall comply with the following for the fermentation process:

(1) The VOC emissions from the fermentation process shall be controlled by wet scrubbers CE005 and CE010.

(2) The overall control efficiency (including the capture efficiency and adsorption efficiency) for each of the wet scrubbers CE005 and CE010 shall be at least 98%, or the VOC outlet concentration from the scrubbers CE005 and CE010 shall not exceed 20 ppmv, each.

(b) Pursuant to 326 IAC 8-5-6, the Permittee shall comply with the following for the DDGS Dryers (EU035 and EU056) and the distillation process:

(1) The VOC emissions from the DDGS Dryers (EU035 and EU056) and the distillation process shall be controlled by the TO/HRSG system CE007.

(2) The overall control efficiency for the thermal oxidizer CE007 (including the capture efficiency and destruction efficiency) shall be at least 98%, or the VOC outlet concentration shall not exceed 10 ppmv.

(c) Pursuant to 326 IAC 8-5-6, the Permittee shall comply with the following for the ethanol loading racks EU045A and EU045B:

(1) The VOC emissions from the ethanol loading rack for trucks (EU045A) and shall be collected and controlled by enclosed flare CE009.

(2) The VOC emissions from the ethanol loading rack for railcars (EU045B) shall be collected and controlled by enclosed flare CE009.

(3) The overall efficiency for the enclosed flare CE009 (including the capture efficiency and destruction efficiency) shall be at least 98%.

(d) Since the proposed distillation process will only produce non-fuel grade ethanol, the requirements of 326 IAC 8-5-6 do not apply to the process.

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 source are as follows:

(a) The compliance determination requirements applicable to the grain/DDGS receiving and handling are as follows:

(1) Testing Requirements
No later than five (5) years after the date of the most recent valid compliance demonstration, compliance with the PM, PM_{10}, and $PM_{2.5}$ emission limitations for baghouses CE001, CE003, and CE008 shall be determined by a performance stack test. Testing shall be repeated every five (5) years.

(2) Emission Controls Operation
The baghouses for particulate control shall be in operation and control emissions from the emission units at all times that the emission units are in operation, as listed in the table below, when these units are in operation:

Unit ID	Unit Description	Baghouse ID
EU001 - EU007, EU064	Grain Receiving and Handling	CE001
EU010, EU011, EU067	Hammermills	CE003
EU040 - EU043	DDGS Handling and Loadout	CE008
EU070 - EU074 and EU076, EU077	Truck/Railcar Unloading Areas/Conveyors and Storage Bins	CE015
EU075	Fork Truck Unloading Area	CE016
EU078 and EU079	Surge Hoppers	CE017
EU080	Truck Unloading Area	CE018

These requirements are required to ensure compliance with 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) and to render 326 IAC 2-2 (PSD) not applicable.

(b) The compliance determination requirements applicable to the fermentation process are as follows:

(1) Testing Requirements
No later than five (5) years after the date of the most recent valid compliance demonstration, compliance with the VOC and acetaldehyde emission limitations for wet scrubbers CE005 and CE010 shall be determined by a performance stack test. Testing shall be repeated every five (5) years. The VOC testing shall include emission rate, adsorption efficiency, and capture efficiency.

(2) Emission Controls Operation
Wet scrubbers CE005 and CE010 for VOC and HAP control shall be in operation and control emissions from the fermentation process at all times that this process is in operation.

These requirements are required to ensure compliance with 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills) and to render 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants) not applicable.

(c) The compliance determination requirements applicable to the TO/HRSG system and DDGS drying are as follows:

(1) Testing Requirements
No later than five (5) years after the date of the most recent valid compliance demonstration, compliance with the PM, PM_{10}, $PM_{2.5}$, VOC, SO_2, CO, NO_x, and acetaldehyde emission limitations for thermal oxidizer CE007 shall be determined by a performance stack test. Testing shall be repeated every five (5) years. The VOC testing shall include emission rate, adsorption efficiency, and capture efficiency.

(2) Emission Controls Operation
The TO/HRSG system (CE007) for VOC and HAP control shall be in operation and control emissions from the DDGS dryers (EU035 and EU056) and the distillation process at all times that these units are in operation.

(3) Emission Controls Operation
The cyclone (CE006) for particulate control shall be in operation and control emissions from the DDGS dryers (EU035 and EU056) at all times these units are in operation.

These requirements are required to ensure compliance with 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills) and to render 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants) not applicable.

(d) The compliance determination requirements applicable to the DDGS cooler are as follows:

(1) Testing Requirements
No later than five (5) years after the date of the most recent valid compliance demonstration, compliance with the PM, PM_{10}, $PM_{2.5}$, VOC, and acetaldehyde emission limitations for baghouse CE014 shall be determined by a performance stack test. Testing shall be repeated every five (5) years.

(2) Emission Controls Operation
Baghouse CE014 for particulate control shall be in operation and control emissions from the DDGS cooler at all times that this unit is in operation

These requirements are required to ensure compliance with 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) and to render 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants) not applicable.

(e) The compliance determination requirements applicable to the ethanol loading racks are as follows:

(1) Testing Requirements
No later than five (5) years after the date of the most recent valid compliance demonstration, compliance with the VOC, CO, and NO_x emission limitations for enclosed flare CE009 shall be determined by a performance stack test. Testing shall be repeated every five (5) years. The VOC testing shall include emission rate, capture efficiency, and destruction efficiency.

(2) Emission Controls Operation

(A) Enclosed flare CE009 for VOC and HAP control shall be in operation and control emissions from the ethanol loading racks (EU045A and EU045B) at all times when these racks are in operation.

(B) The ethanol loading racks (EU045A and EU045B) shall utilize submerged loading method.

(C) The railcars and trucks shall not use vapor balance services.

These requirements are required to ensure compliance with 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills) and to render 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants) not applicable.

(f) The compliance determination requirements applicable to the non-fuel grade ethanol loading skids are as follows:

(1) Testing Requirements
No later than five (5) years after the date of the most recent valid compliance demonstration, compliance with the VOC, CO, and NO_x emission limitations for enclosed flare CE019 shall be determined by a performance stack test. Testing shall be repeated every five (5) years. The VOC testing shall include emission rate, capture efficiency, and destruction efficiency.

(2) Emission Controls Operation

(A) Enclosed flare CE019 for VOC and HAP control shall be in operation and control emissions from the non-fuel grade ethanol loading skids (EU083 and EU084) at all times when these racks are in operation.

(B) The non-fuel grade ethanol loading skids (EU083 and EU084) shall utilize submerged loading method.

(C) The railcars and trucks shall not use vapor balance services.

These requirements are required to ensure compliance with 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills) and to render 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants) not applicable.

The compliance monitoring requirements applicable to this source are as follows:

(a) The compliance monitoring requirements applicable to the grain/DDGS receiving and handling are as follows:

(1) Visible Emissions Notations
Visible emission notations of the CE001, CE003, CE008, CE015, CE016, CE017, and CE018 stack exhausts shall be performed once per day during normal daylight operations.

(2) Baghouse Parametric Monitoring
The Permittee shall record the pressure drop across the baghouses used in conjunction with the corn dump pits (EU001), the grain handling operations (EU002 through EU007, and EU064), the hammermills (EU010, EU011, and EU067), the DDGS handling and loadout operations (EU040 through EU043), the truck and railcar unloading areas and conveyors and storage bins (EU070 through EU074, EU076, EU077, and EU080), the fork truck unloading area (EU075), and the surge hoppers (EU078 and EU079), at least once per day when these units are in operation.

(3) Broken or Failed Bag Detection

The Permittee shall maintain the baghouses and replace broken or failed bags as needed.

These monitoring conditions are necessary because the baghouses must operate properly to ensure compliance with 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) and 326 IAC 2-7 (Part 70).

(b) The compliance monitoring requirements applicable to the fermentation process are as follows:

(1) Scrubber Parametric Monitoring
The Permittee shall monitor and record the pressure drop and flow rate of wet scrubbers CE005 and CE010 at least once per day when the fermentation process is in operation.

(2) Scrubber Detection
The Permittee shall maintain the scrubbers as needed.

These monitoring conditions are necessary because the scrubbers must operate properly to ensure compliance with 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills) and 326 IAC 2-7 (Part 70).

(c) The compliance monitoring requirements applicable to the TO/HRSG system and DDGS drying are as follows:

(1) Visible Emissions Notations
Visible emission notations of the TO/HRSG system stack exhaust (EP007) shall be performed once per day during normal daylight operations.

(2) Thermal Oxidizer Temperature
A continuous monitoring system shall be calibrated, maintained, and operated on the TO/HRSG system (CE007) for measuring operating temperature. For the purpose of this condition, continuous means no less than once per fifteen (15) minute. The output of this system shall be recorded as a 3-hour average. The Permittee shall operate the thermal oxidizer at or above the 3-hour average temperature as observed during the latest compliant stack test.

(3) Thermal Oxidizer Parametric Monitoring
The Permittee shall monitor and record the duct pressure or fan amperage of the TO/HRSG system (CE007) at least once per day when the thermal oxidizer/heat recovery steam generator is in operation.

These monitoring conditions are necessary because the thermal oxidizer must operate properly to ensure compliance with 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills) and 326 IAC 2-7 (Part 70).

(d) The compliance monitoring requirements applicable to the DDGS cooler are as follows:

(1) Visible Emissions Notations
Visible emission notations of the CE014 stack exhaust shall be performed once per day during normal daylight operations.

(2) Baghouse Parametric Monitoring
The Permittee shall record the pressure drop across the baghouse used in conjunction with the DDGS cooler at least once per day when this unit is in operation.

(3) Broken or Failed Bag Detection
The Permittee shall maintain the baghouse and replace broken or failed bags as needed.

These monitoring conditions are necessary because the baghouse must operate properly to ensure compliance with 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) and 326 IAC 2-7 (Part 70).

(e) The compliance monitoring requirements applicable to the ethanol loading racks are as follows:

The Permittee shall monitor the presence of a flare pilot flame using a thermocouple or any other equivalent device to detect the presence of a flame when ethanol loading racks EU045A and/or EU045B are in operation.

These monitoring conditions are necessary because the flare must operate properly to ensure compliance with 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills) and 326 IAC 2-7 (Part 70).

(f) The compliance monitoring requirements applicable to the biomethanator are as follows:

The Permittee shall monitor the presence of a flare pilot flame using a thermocouple or any other equivalent device to detect the presence of a flame when the biomethanator is in operation.

These monitoring conditions are necessary because the flare must operate properly to ensure compliance with 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills) and 326 IAC 2-7 (Part 70) and to render 326 IAC 2-2 (PSD) not applicable.

(g) The compliance monitoring requirements applicable to the non-fuel grade ethanol loading skids are as follows:

The Permittee shall monitor the presence of a flare pilot flame using a thermocouple or any other equivalent device to detect the presence of a flame when the non-fuel grade ethanol loading racks EU083 and/or EU084 are in operation.

These monitoring conditions are necessary because the flare must operate properly to ensure compliance with 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70).

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. T053-32070-00062. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Changes Affecting Conditions Throughout the Permit

(a) *Multiple Conditions - Source Status*
Throughout the permit, language and rule sites have been updated from the standard language for the FESOP to the current standard language for the Part 70 Permits.

(b) *Multiple Conditions - Typographical Errors, Language Clarification*
Throughout the permit, typographical and grammatical errors have been corrected. Additionally, changes to language for clarification or to align with the current preferred permit language conventions have been made.

Changes Specific to Section A of the Permit

(a) Section A.1 has been updated to reflect the new general information of the source.

(b) Section A.2 has been added to show that Central Indiana Ethanol, LLC and EPCO Carbon Dioxide Products are one major source.

(c) Section A.3 and Section A.4 have been updated with new equipment and equipment that has been removed.

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**, and A.4** is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information ~~[326 IAC 2-8-3(b)]~~ **[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 ethanol production plant~~, capable of producing both dried distillers grain solubles (DDGS) and wet distillers grain solubles (WDGS)~~.

***

Source Status: ~~Federally Enforceable State Operating Permit Program~~ **Part 70 Operating Permit Program**

***

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

This stationary ethanol production plant consists of two (2) plants:

(a) Central Indiana Ethanol, LLC is located at 2955 West Delphi Pike, Marion, Indiana; and

(b) EPCO Carbon Dioxide Products is located at 2975 West Delphi Pike, Marion, Indiana.

However, these plants are located on one or more contiguous properties, have the same two digit SIC code in addition to a support relationship, and are under common control. Therefore, they are considered one (1) major source, as defined by 326 IAC 2-7-1(22).

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

(b) ***

(c) ***

(d) ***

(e) ***

(f) ***

(g) ***

(h) ***

(i) ***

(j) ***

(k) ***

(l) ***

(m) ***

(n) One (1) distillation process, approved in 2013 for construction, with a maximum throughput rate of 40,000 gallons of non-fuel grade ethanol per hour, consisting of the following:

(1) Three (3) distillation columns and seven (7) condensers operating in a close loop.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(2) Two (2) liquid storage tanks, identified as T013 and T014, each with a maximum capacity of 500,000 gallons.

Under 40 CFR 60, Subpart Kb, T013 and T014 are affected facilities.

(3) Three (3) liquid storage tanks, identified as T015, T016, and T017, each with a maximum capacity of 24,000 gallons.

Under 40 CFR 60, Subpart Kb, T015, T016, and T017 are affected facilities.

(4) Two (2) natural gas fired boilers, identified as Boiler #1 (EU081) and Boiler #2 (EU082), each with a maximum heat input rate of 48.16 MMBtu/hr, exhausting uncontrolled to stacks EP020 and EP021, respectively.

Under 40 CFR 60, Subpart Dc, EU081 and EU082 are affected facilities.

(o) One (1) non-fuel grade ethanol loading skid for trucks, identified as EU083, approved in 2013 for construction, with a maximum throughput rate of 1000 gallons per minute. The truck loading process is controlled by the enclosed flare CE019, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP019.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(p) One (1) non-fuel grade ethanol loading skid for railcars, identified as EU084, approved in 2013 for construction, with a maximum throughput rate of 1667 gallons per minute. The railcar loading process is controlled by the enclosed flare CE019, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP019.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

A.~~3~~**4** Insignificant Activities [326 IAC 2-7-1(21)][~~326 IAC 2-8-3(c)(3)(I)~~] **[326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)]**

This stationary source also includes the following insignificant activities:

(a) ***

(b) ***

(c) ***

(d) ***

(e) ***

(f) ***

(g) ***

(h) ***

(i) ***

(j) ***

(k) Other emission units, not regulated by a NESHAP, with PM10, NOx, and SO_2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(1) ***

(2) ***

(3) ***

(4) ***

(5) ***

(6) ***

(7) ***

(8) ***

(9) ***

~~(10) One (1) E-98 (racing fuel) storage tank, identified as T011, approved for construction in 2010, with a maximum capacity of 1,000 gallons of E-98 racing fuel, and exhausting to the atmosphere.~~

~~(11) One (1) 114-octane racing fuel additive storage tank, identified as T012, approved for construction in 2010, with a maximum capacity of 500 gallons of additive, and exhausting to the atmosphere.~~

(12**1**) One (1) biomethanator, identified as EU048, constructed in 2006, controlled by 6.0 MMBtu/hr biomethanator flare CE013, and exhausting to stack EP013.

(13**2**) ***

(14**3**) ***

EPCO Carbon Dioxide Products

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, including space heaters with a combined heat input capacity not to exceed 0.63 million (630,000) Btu per hour.

(b) Forced and induced draft cooling tower systems not regulated under a NESHAP, consisting of:

(1) One (1) four cell cooling tower, identified as EPCO, with a circulation rate of 900 gallons per minute.

(c) Paved roads and parking lots with public access. [326 IAC 6-4] [326 IAC 6-5]

~~A.4 FESOP Applicability [326 IAC 2-8-2]~~

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

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).

Changes Specific to Section B and C of the Permit

Section B and Section C are standard conditions for the Permittee based on the permit level. This is a FESOP transitioning to a Title V Permit. The pervious Section B and Section C have been deleted and replaced with the most up-to-date Sections for a Title V source. These changes are not shown in this TSD.

Changes Specific to Section D and E of the Permit

(a) In order to make the requirement of 326 IAC 2-2 (PSD) not applicable to the existing equipment, the source has decided to continue operating the existing equipment with their FESOP minor limits. These FESOP minor limits will now be the source's PSD and MACT minor limits.

(b) IDEM, OAQ has decided to clarify Section D - Testing Requirements to state that testing shall be done in accordance with 326 IAC 3-6 instead of in accordance with another permit condition that refers to 326 IAC 3-6.

(c) IDEM, OAQ has decided to clarify what equipment needs a Preventive Maintenance Plan, PMP.

(d) IDEM, OAQ has decided that taking a data point no less often than once per fifteen (15) minutes is sufficient for continuous monitoring.

(e) IDEM, OAQ has decided to clarify what rule requirements needs to be reported.

(f) Section D.7 have been added to reflect the operating conditions of the new non-fuel grade ethanol distillation process.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS – Grain / DDGS Receiving & Handling

Facility Description **[326 IAC 2-7-5(14)]**~~[326 IAC 2-8-4(10)]~~:

Emission Limitations and Standards [326 IAC 2-~~8-4~~ **7-5**(1)]

D.1.1 ~~FESOP and~~ PSD Limits ~~[326 IAC 2-8-4]~~ [326 IAC 2-2]

~~(a)~~ In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, PM emissions from the following units shall not exceed the emission limits listed in the table below:

Unit ID	Stack ID	Unit Description	Control ID	PM Emission Limit (lbs/hr)
EU001 - EU007, EU0064	EP001	Grain Receiving and Handling	CE001	1.67
EU010, EU011, EU067	EP003	Hammermills	CE003	1.20
EU040 - EU043	EP008	DDGS Handling and Loadout	CE008	0.16

Note: Emission limits are combined lb/hr limits for all emission units exhausting out of each stack.

~~(b) Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable, PM10 and PM2.5 emissions from the following units shall not exceed the emission limits listed in the table below:~~

~~Unit ID~~	~~Stack ID~~	~~Unit Description~~	~~Control ID~~	~~PM10 Emission Limit (lbs/hr)~~	~~PM2.5 Emission Limit (lbs/hr)~~
~~EU001 - EU007, EU0064~~	~~EP001~~	~~Grain Receiving and Handling~~	~~CE001~~	~~1.67~~	~~1.67~~
~~EU010, EU011, EU067~~	~~EP003~~	~~Hammermills~~	~~CE003~~	~~1.20~~	~~1.20~~
~~EU040 - EU043~~	~~EP008~~	~~DDGS Handling and Loadout~~	~~CE008~~	~~0.16~~	~~0.16~~

~~Note: Emission limits are combined lb/hr limits for all emission units exhausting out of each stack.~~

Compliance with these PM, **PM_{10}, and $PM_{2.5}$** limits in conjunction with the **potential to emit** PM, **PM_{10}, and $PM_{2.5}$** ~~PTE~~ from all other emission units **at the source,** shall limit the PM, **PM_{10}, and**

$PM_{2.5}$ emissions from the entire source to less than 250 tons per year and therefore, render the requirements of 326 IAC 2-2 (PSD) not applicable.

~~Compliance with these PM10 and PM2.5 limits in conjunction with the PM10 and PM2.5 PTE emissions from all other emissions units shall limit the PM10 and PM2.5 emissions from the entire source to less than 100 tons per year. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program) and 326 IAC 2-2 (PSD) are not applicable.~~

D.1.2 Particulate Emission Limitations [326 IAC 6-3-2]

(~~1~~**a**) ***

(~~2~~**b**) ***

D.1.3 Preventive Maintenance Plan [~~326 IAC 2-8-4(9)~~] **[326 IAC 2-7-5(12)]**

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

D.1.4 Particulate Control

~~(a)~~ In order to comply with Conditions D.1.1~~(a) and (b),~~ and D.1.2, the baghouses for particulate control shall be in operation and control emissions from the emission units at all times that the emission units are in operation as listed in the table below~~, when these units are in operation~~:

Unit ID	Unit Description	Baghouse ID
EU001 - EU007, EU064	Grain Receiving and Handling	CE001
EU010, EU011, EU067	Hammermills	CE003
EU040 - EU043	DDGS Handling and Loadout	CE008
~~EU070 - EU074 and EU076, EU077~~	~~Truck/Railcar Unloading Areas/Conveyors and Storage Bins~~	~~CE015~~
~~EU075~~	~~Fork Truck Unloading Area~~	~~CE016~~
~~EU078 and EU079~~	~~Surge Hoppers~~	~~CE017~~
~~EU080~~	~~Truck Unloading Area~~	~~CE018~~

***

~~(b)~~ ***

D.1.5 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.1.1~~(a)~~ and D.1.2, the Permittee shall perform PM**, PM_{10}, and $PM_{2.5}$** testing for baghouses CE001, CE003, and CE008 ~~not later than five (5) years after the date of the most recent valid compliance demonstration,~~ utilizing methods as approved by the Commissioner **at least once every five (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. PM_{10} and $PM_{2.5}$ includes filterable and condensible PM.** ~~These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.~~

~~(b) In order to demonstrate compliance with Condition D.1.1(b) the Permittee shall perform PM10 and PM2.5 testing for baghouses CE001, CE003, and CE008 not later than five (5) years after the date of the most recent valid compliance demonstration, or within one hundred eighty (180) days of publication of the new or revised condensible PM test method(s) referenced in the U.S. EPA's Final Rule for Implementation of the New Source~~

~~Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008, whichever is later, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM-10 and PM-2.5 includes filterable and condensible PM-10 and PM-2.5.~~

~~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.~~

Compliance Monitoring Requirements ~~[326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]~~ **[326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

D.1.6 Visible Emissions Notations

(a) Visible emission notations of **baghouse** ~~the stack exhaust from the~~ CE001, CE003, **and** CE008~~, CE015, CE016, CE017, and CE018~~ stack exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) ***

(c) ***

(d) ***

(e) ***

D.1.7 Parametric Monitoring

~~(a)~~ The Permittee shall record the pressure drop across the baghouses used in conjunction with the corn dump pits (EU001), the grain handling operations (EU002 through EU007, and EU064), the hammermills (EU010, EU011, and EU067), the DDGS handling and loadout operations (EU040 through EU043), ~~the truck and railcar unloading areas and conveyors and storage bins (EU070 through EU074, EU076, EU077, and EU080), the fork truck unloading area (EU075), and the surge hoppers (EU078 and EU079),~~ at least once per day when these **the associated emission** units are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range, **the permittee shall take a reasonable response. The normal range for these units is a pressure drop between** ~~of~~ 1.0 to 6.0 inches of water **unless a different upper-bound or lower-bound value for this** ~~or a~~ range **is determined** ~~established~~ during the latest stack test~~, the Permittee shall take reasonable response steps~~. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure 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.

~~(b)~~ ***

Record Keeping and Reporting Requirements ~~[326 IAC 2-8-4(3)] [326 IAC 2-8-16]~~ **[326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS - Fermentation Process

Facility Description **[326 IAC 2-7-5(14)]**~~[326 IAC 2-8-4(10)]~~:

Emission Limitations and Standards [326 IAC 2-**7-5**~~8-4~~(1)]

D.2.1 ~~FESOP~~ **PSD and MACT Minor Limits for** VOC and HAP ~~Emissions [326 IAC 2-8-4]~~ [326 IAC 2-2] [326 IAC 2-4.1]

In order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (MACT) not applicable, the Permittee shall comply with the following:

(a) ~~Pursuant to 326 IAC 2-8-4 (FESOP),~~ Emissions from wet scrubber CE005, which is used to control the emissions from the fermentation process, shall **not exceed** ~~comply with~~ the following:
***

(b) ~~Pursuant to 326 IAC 2-8-4 (FESOP),~~ Emissions from wet scrubber CE010, which is used to control the emissions from the fermentation process, shall **not exceed** ~~comply with~~ the following:
***

Compliance with these VOC limits, combined with the potential to emit VOC from other emission units at the source, shall limit the VOC emissions from the entire source to less than 250 tons per twelve (12) consecutive month period and render 326 IAC 2-2 (PSD) not applicable.

Compliance with these HAP limits, combined with the potential to emit HAP from other emission units at the source, shall limit the HAP emissions from the entire source to less than 10 tons per twelve (12) consecutive month period for a single HAP and less than 25 tons per twelve (12) consecutive month period for total HAPs and render 326 IAC 2-4.1 (MACT) not applicable.

~~Combined with the VOC and HAP emissions from other units, the VOC emissions from the entire source are limited to less than 100 tons/yr, and the HAP emissions from the entire source are limited to less than 10 tons/yr for a single HAP and less than 25 tons/yr for combined HAPs. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program), 326 IAC 2-2 (PSD), and 326 IAC 2-4.1 (MACT) are not applicable.~~

D.2.3 Preventive Maintenance Plan ~~[326 IAC 2-8-4(9)]~~ **[326 IAC 2-7-5(12)]**

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

D.2.4 VOC and HAP Control

In order to **ensure compliance** ~~comply~~ with Conditions D.2.1 and D.2.2, wet scrubbers CE005 and CE010 **for VOC and HAP control** shall be in operation and control emissions from the fermentation process ~~at all times that this process~~ is in operation.

D.2.5 Testing Requirements [326 IAC 2-1.1-11][326 IAC 8-5-6]

(a) In order to **demonstrate** ~~verify~~ compliance with Conditions D.2.1(a) and D.2.2(b), the Permittee shall perform VOC (including emission rate, adsorption efficiency, and capture efficiency) and acetaldehyde testing for scrubber CE005 ~~not later than five (5) years after the date of the most recent valid compliance demonstration,~~ utilizing methods as approved by the Commissioner~~. These tests shall be repeated~~ at least once every five (5) years from the date of the most recent valid compliance demonstration.

(b) In order to **demonstrate** ~~verify~~ compliance with Conditions D.2.1(b) and D.2.2(c), the Permittee shall perform VOC (including emission rate, adsorption efficiency, and capture efficiency) and acetaldehyde testing for scrubber CE010 ~~not later than five (5) years after~~

~~the date of the most recent valid compliance demonstration,~~ utilizing methods as approved by the Commissioner~~. These tests shall be repeated~~ at least once every five (5) years from the date of the most recent valid compliance demonstration.

***

Compliance Monitoring Requirements ~~[326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]~~ **[326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

D.2.6 Parametric Monitoring [326 IAC 8-5-6]

(a) The Permittee shall monitor and record ~~the pressure drop and flow rate of~~ scrubber CE005~~, at least once per day when the fermentation process is in operation~~ **as follows**:

(1) **The Permittee shall monitor and record the pressure drop across scrubber CE005 at least once per day when the fermentation process is in operation.** When**,** for any one reading, the pressure drop across **the scrubber** ~~CE005~~ is outside **the normal range, the Permittee shall take a reasonable response step.** The normal range~~, of~~ **for these units is a pressure drop between** 1.0 and 6.0 inches of water **unless a different upper-bound or lower-bound value for this range is determined**~~, or a range established~~ during the latest stack test. ~~the Permittee shall take reasonable response steps.~~ Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. ~~A pressure reading that is outside the above mention range is not a deviation from this permit.~~ Failure to take response steps shall be considered a deviation from this permit.

(2) The Permittee shall monitor and record the flow rate of scrubber CE005 at least once per day when the fermentation process is in operation.

(3) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Conditions D.2.1(a) and D.2.2(b).

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

(~~2~~**5**) When for any one reading, the flow rate ~~of CE005~~ is **nelow the above mentioned** ~~less than the~~ minimum**,** ~~of 20 gallons per minute, or a minimum established during the latest stack test,~~ the Permittee shall take reasonable response ~~steps~~. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. ~~A flow rate that is below the above mentioned minimum is not a deviation from this permit.~~ Failure to take response steps shall be considered a deviation from this permit.

(b) The Permittee shall monitor and record ~~the pressure drop and flow rate of~~ scrubber CE010 **as follows**~~, at least once per day when the fermentation process is in operation~~:

(1) **The Permittee shall monitor and record the pressure drop across scrubber CE010 at least once per day when the fermentation process is in operation.** When for any one reading, the pressure drop across **the across the scrubber** ~~CE010~~ is outside **the normal range, the Permittee shall a take reasonable response step.** The normal range **for these units is a pressure drop between** ~~of~~ 6.0 and 15.0 inches of water **unless a different upper-bound or lower-bound value for this range is determined**~~, or a range established~~ during the latest stack test~~, the Permittee shall take reasonable response steps~~. Section C –

Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. ~~A pressure reading that is outside the above mention range is not a deviation from this permit.~~ Failure to take response steps shall be considered a deviation from this permit.

(2) The Permittee shall monitor and record the flow rate of scrubber CE010 at least once per day when the fermentation process is in operation.

(3) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Conditions D.2.1(b) and D.2.2(c).

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

(~~2~~**5**) When, for any one reading, the flow rate ~~of CE010~~ is **below the above mentioned** ~~less than the~~ minimum ~~of 20 gallons per minute, or a minimum established during the latest stack test~~, the Permittee shall take reasonable response ~~steps~~. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. ~~A flow rate that is below the above mentioned minimum is not a deviation from this permit.~~ Failure to take response steps shall be considered a deviation from this permit.

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D.2.7 Scrubber Detection

In the event that a scrubber 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 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). ~~Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.~~

Record Keeping and Reporting Requirement ~~[326 IAC 2-8-4(3)] [326 IAC 2-8-16]~~ **[326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS – TO/HRSG System & DDGS Drying

Facility Description **[326 IAC 2-7-5(14)]**~~[326 IAC 2-8-4(10)]~~:

Emission Limitations and Standards ~~[326 IAC 2-8-4(1)]~~ **[326 IAC 2-7-5(1)]**

D.3.1 PSD **and MACT** Minor Limits **for PM, PM_{10}, $PM_{2.5}$, VOC, CO, SO_2, NO_x, and HAP [326 IAC 2-4.1]** [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) **and 326 IAC 2-4.1 (MACT)** not applicable, the Permittee shall comply with the following emission limit for the TO/HRSG System CE007, which is used to control the DDGS dryers (EU035 and EU056) and the distillation process:

(~~1~~**a**) PM emissions shall not exceed 8.0 lbs/hr.

(b) PM_{10} emissions shall not exceed 8.0 lb/hr.

(c) $PM_{2.5}$ emissions shall not exceed 8.0 lb/hr.

(d) VOC emissions shall not exceed 5.15 lb/hr.

(e) CO emissions shall not exceed 21.0 lb/hr.

(f) SO_2 emissions shall not exceed 8.5 lb/hr.

(g) NO_x emissions shall not exceed 19.7 lb/hr.

(h) Acetaldehyde emissions shall not exceed 0.18 lb/hr.

(i) Total HAP emissions shall not exceed 0.53 lb/hr.

Compliance with this PM**, PM_{10}, $PM_{2.5}$, VOC, SO_2, CO, and NO_x** limit**s, combined with the potential to emit** ~~in conjunction with the limited~~ PM**, PM_{10}, $PM_{2.5}$, VOC, SO_2, CO, and NO_x** ~~PTE~~ from other emission units **at the source,** shall limit the PM**, PM_{10}, $PM_{2.5}$, VOC, SO_2, CO, and NO_x** emissions from the entire source to less than 250 tons per **twelve (12) consecutive month period** ~~year~~ and ~~therefore,~~ render ~~the requirements of~~ 326 IAC 2-2 (PSD) not applicable.

Compliance with these HAP limits, combined with the potential to emit HAP from other emission units at the source, shall limit the HAP emissions from the entire source to less than 10 tons per twelve (12) consecutive month period for a single HAP and less than 25 tons per twelve (12) consecutive month period for total HAPs and render 326 IAC 2-4.1 (MACT) not applicable.

~~D.3.2 FESOP Limits [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-4.1]~~

~~Pursuant to 326 IAC 2-8-4 (FESOP) and in order to make the requirements of 326 IAC 2-2 (PSD) not applicable, emissions from TO/HRSG System CE007, which is used to control the DDGS dryers (EU035 and EU056) and the distillation process shall not exceed the following:~~

~~(a) PM10 emissions shall not exceed 8.0 lbs/hr.~~

~~(b) PM2.5 emissions shall not exceed 8.0 lbs/hr.~~

~~(c) VOC emissions shall not exceed 5.15 lbs/hr.~~

~~(d) CO emissions shall not exceed 21.0 lbs/hr.~~

~~(e) SO_2 emissions shall not exceed not exceed 8.5 lbs/hr.~~

~~(f) NOx emissions shall not exceed 19.7 lbs/hr.~~

~~(g) Acetaldehyde emissions shall not exceed 0.18 lbs/hr.~~

~~(h) Total HAP emissions shall not exceed 0.53 lbs/hr.~~

~~Combined with the PM10, PM2.5, VOC, SO_2, CO, NOx, and HAP emissions from other units, the PM10, PM2.5, VOC, SO_2, CO, and NOx emissions from the entire source are each limited to less than 100 tons/yr and the HAP emissions from the entire source are limited to less than 10 tons/yr for a single HAP and less than 25 tons/yr for combined~~

~~HAPs. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program), 326 IAC 2-2 (PSD), and 326 IAC 2-4.1 (MACT) are not applicable.~~

D.3.~~3~~**2** VOC Emissions [326 IAC 8-5-6]

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D.3.~~4~~**3** Particulate Emissions [326 IAC 6-2-4]

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D.3.~~5~~**4** Particulate Emission Limitations [326 IAC 6-3-2]

***

D.3.~~6~~**5** Preventive Maintenance Plan [326 IAC **IAC 2-7-5(12)**~~2-8-4(9)~~]

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

D.3.~~7~~**6** VOC and HAP Control

In order to comply with Conditions **D.3.1(d), D.3.1(h), D.3.1(i), and D.3.2** ~~D.3.2(c) and D.3.3~~, the TO/HRSG system (CE007) **for VOC and HAP control** shall be in operation and control emissions from the DDGS dryers (EU035 and EU056) and the distillation process, at all times that these units are in operation.

D.3.~~8~~**7** Particulate Control

In order to comply with Conditions **D.3.1(a), D.3.1(b), D.3.1(c), and D.3.4** ~~D.3.1, D.3.2(a), and D.3.3(b)~~, the cyclone (CE006) for particulate control shall be in operation and control emissions from the DDGS Dryers (EU035 and EU056) at all times these units are in operation.

D.3.~~9~~**8** Testing Requirements [326 IAC 2-1.1-11] [326 IAC 8-5-6]

~~(a)~~ In order to demonstrate compliance with Conditions D.3.1, D.3.2~~(c),(d),(e),(f),(g),(h)~~, D.3.3, **and** D.3.4, ~~and D.3.5~~, the Permittee shall perform PM, **PM_{10}, $PM_{2.5}$,** VOC (including emission rate, destruction efficiency, and capture efficiency), SO_2, CO, NOx, ~~and~~ acetaldehyde, **and total HAP** testing for thermal oxidizer CE007 ~~not later than five (5) years after the date of the most recent valid compliance demonstration,~~ utilizing methods as approved by the Commissioner~~. These tests shall be repeated~~ at least once every five (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. PM_{10} and $PM_{2.5}$ includes filterable and condensible PM.**

~~(b) In order to demonstrate compliance with Conditions D.3.2(a) and D.3.2(b), the Permittee shall perform PM10 and PM2.5 testing for thermal oxidizer CE007 not later than five (5) years after the date of the most recent valid compliance demonstration, or within one hundred eighty (180) days of publication of the new or revised condensible PM test method(s) referenced in the U.S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008, whichever is later, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM-10 and PM-2.5 includes filterable and condensible PM-10 and PM-2.5.~~

~~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.~~

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

D.3.~~10~~**9** Visible Emissions Notations

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D.3.1~~1~~**0** Thermal Oxidizer Temperature [326 IAC 8-5-6]

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the TO/HRSG system (CE007) for measuring operating temperature. For the purpose of this condition, continuous means no less than once per **fifteen (15)** minute. The output of this system shall be recorded as a 3-hour average. ~~The Permittee shall operate the thermal oxidizer at or above the 3-hour average temperature of 1,471°F.~~

(b) The Permittee shall determine the 3-hour average temperature from the **latest** ~~most recent~~ valid stack test that demonstrates compliance with limits in Conditions **D.3.1 and** D.3.2 ~~and D.3.3, as approved by IDEM~~.

(c) On and after the date the ~~approved~~ 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. Failure to take response steps shall be considered a deviation from this permit.

D.3.1~~2~~**1** Parametric Monitoring [326 IAC 8-5-6]

(a) **A continuous monitoring system shall be calibrated, maintained, and operated on the TO/HRSG system (CE007) for measuring the duct pressure or fan amperage. 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 a 3-hour average.**

(b) The Permittee shall determine the appropriate **3-hour average** duct pressure or fan amperage from the **latest** ~~most recent~~ valid stack test that demonstrates compliance with limits in Conditions **D.3.1 and** D.3.2 ~~and D.3.3, as approved by IDEM~~.

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

(c) On and after the date the stack test results are available, the 3-hour average duct pressure or fan amperage shall be maintained within the 3-hour average normal range as established in the latest compliant stack test.

(d) When, for any one reading, the 3-hour average duct pressure or fan amperage is outside the above mentioned 3-hour average ranges, the Permittee shall take a reasonable response. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.3.12 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 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 and Reporting Requirement ~~[326 IAC 2-8-4(3)] [326 IAC 2-8-16]~~ **[326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

D.3.13 Record Keeping Requirements [326 IAC 8-5-6]

(a) To document the compliance status with Condition D.3.**9**~~10~~, the Permittee shall maintain records of daily visible emission notations of the stack EP007. 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).

(b) To document the compliance status with Condition D.3.1**0**~~1~~, the Permittee shall maintain continuous temperature records for the thermal oxidizer and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.

(c) To document the compliance status with Condition D.3.1**1**~~2~~, the Permittee shall maintain **continuous** ~~daily records of the~~ duct pressure or fan amperage for the TO/HRSG system CE007 **and the 3-hour average duct pressure or fan amperage used to demonstrate compliance during the most recent compliant stack test**. ~~The Permittee shall include in its daily record when a duct pressure or fan amperage reading is not taken and the reason for the lack of a duct pressure or fan amperage reading (e.g. the process did not operate that day).~~

(d) Section C - General Record Keeping Requirements **of this permit** contains the Permittee's obligation with regard to the **records required by this condition** ~~recordkeeping requirements of this requirement~~.

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS – DDGS Cooler

Facility Description **[326 IAC 2-7-5(14)]**~~[326 IAC 2-8-4(10)]~~:

Emission Limitations and Standards [326 IAC ~~2-8-4(~~**2-7-5(**1)]

D.4.1 PSD **and MACT** Minor Limits **for PM, PM_{10}, $PM_{2.5}$, and HAP [326 IAC 2-4.1]** [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following emission limit for DDGS Cooler (EU036), which is controlled by baghouse CE014:

(~~1~~**a**) PM emissions shall not exceed 0.94 lbs/hr.

(b) PM_{10} emissions shall not exceed 0.94 lb/hr.

(c) $PM_{2.5}$ emissions shall not exceed 0.94 lb/hr.

(d) The total DDGS produced shall not exceed 210,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month,

and VOC emissions from DDGS cooler EU036 shall not exceed 0.065 pounds per ton of DDGS produced.

(e) Acetaldehyde emissions shall not exceed 0.075 lb/hr.

Compliance with **these** ~~this~~ PM**, PM_{10}, $PM_{2.5}$, and VOC** limit**s, combined**~~in conjunction~~ with the **potential to emit** ~~limited~~ PM**, PM_{10}, $PM_{2.5}$, and VOC** ~~PTE~~ from other emission units **at the source,** shall limit the PM**, PM_{10}, $PM_{2.5}$, and VOC** emissions from the entire source to less than 250 tons per **twelve (12) consecutive month period** ~~year~~ and ~~therefore,~~ render ~~the requirements of~~ 326 IAC 2-2 (PSD) not applicable.

Compliance with these HAP limits, combined with the potential to emit HAP from other emission units at the source, shall limit the HAP emissions from the entire source to less than 10 tons per twelve (12) consecutive month period for a single HAP and less than 25 tons per twelve (12) consecutive month period for total HAPs and render 326 IAC 2-4.1 (MACT) not applicable.

~~D.4.2 FESOP Limits [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-4.1]~~

~~Pursuant to 326 IAC 2-8-4 (FESOP) and in order to make the requirements of 326 IAC 2-2 (PSD) not applicable, emissions from DDGS Cooler (EU036), which is controlled by baghouse CE014, shall not exceed the following:~~

~~(a) PM10 emissions shall not exceed 0.94 lbs/hr.~~

~~(b) PM2.5 emissions shall not exceed 0.94 lbs/hr.~~

~~(c) The total DDGS produced shall not exceed 210,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month and VOC emissions from DDGS cooler EU036 shall not exceed 0.065 pounds per ton of DDGS produced.~~

~~(d) Acetaldehyde emissions shall not exceed 0.075 lbs/hr.~~

~~Combined with the PM10, PM2.5, VOC, and Acetaldehyde emissions from other units, the PM10, PM2.5, and VOC emissions from the entire source are each limited to less than 100 tons/yr and the HAP emissions from the entire source are limited to less than 10 tons/yr for a single HAP and less than 25 tons/yr for combined HAPs. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program), 326 IAC 2-2 (PSD), and 326 IAC 2-4.1 (MACT) are not applicable.~~

D.4.~~3~~**2** Particulate Emission Limitations [326 IAC 6-3-2]

***

D.4.~~4~~**3** Preventive Maintenance Plan [326 IAC **2-7-5(12)]**~~2-8-4(9)]~~

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

D.4.~~5~~**4** Particulate Control

~~(a)~~ In order to comply with Conditions **D.4.1(a), D.4.1(b), and D.4.1(c)** ~~D.4.1, D.4.2(a), and D.4.2(b)~~, baghouse CE014 **for particulate control** shall be in operation and control emissions from the DDGS Cooler (EU036) at all times that this unit is in operation.

~~(b)~~ ***

D.4.~~6~~**5** Testing Requirements [326 IAC 2-1.1-11]

~~(a)~~ In order to demonstrate compliance with Conditions D.4.1 **and** D.4.2~~(c),and D.4.2(d)~~ the Permittee shall perform PM, **PM_{10}, $PM_{2.5}$,** VOC, and acetaldehyde testing for the DDGS Cooler (EU036) ~~not later than five (5) years after the date of the most recent valid compliance demonstration,~~ utilizing methods as approved by the Commissioner~~. These tests shall be repeated~~ at least once every five (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. PM_{10} and $PM_{2.5}$ includes filterable and condensible PM.**

~~(b) In order to demonstrate compliance with Conditions D.4.2(a) and D.4.2(b), the Permittee shall perform PM10 and PM2.5 testing for the DDGS Cooler (EU036) not later than five (5) years after the date of the most recent valid compliance demonstration, or within one hundred eighty (180) days of publication of the new or revised condensible PM test method(s) referenced in the U.S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008, whichever is later, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM-10 and PM-2.5 includes filterable and condensible PM-10 and PM-2.5.~~

~~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.~~

Compliance Monitoring Requirements ~~[326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]~~ **[326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

D.4.~~7~~**6** Visible Emissions Notations

(a) Visible emission notations of the ~~DDGS Cooler~~ baghouse **CE014** stack exhaust ~~(CE014)~~ shall be performed once per day during normal daylight operations. A trained employee ~~or a trained contractor~~ shall record whether emissions are normal or abnormal.

(b) ***

(c) ***

(d) A trained employee ~~or contractor~~ is a**n employee** ~~person~~ who has worked ~~or trained~~ 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) ***

D.4.~~8~~**7** Parametric Monitoring

~~(a)~~ The Permittee shall record the pressure drop across the baghouse **CE014** ~~used in conjunction with the DDGS Cooler (EU036)~~ at least once per day when **the associated emission** ~~this~~ unit 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** ~~of~~ 1.0 to 6.0 inches of water **unless a different upper-bound or lower-bound value for this range is determined during the** ~~or a range established during the~~ latest stack test~~, the Permittee shall take reasonable response steps~~. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure 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.

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

D.4.~~9~~**8** Broken or Failed Bag Detection

***

Record Keeping and Reporting Requirement ~~[326 IAC 2-8-4(3)] [326 IAC 2-8-16]~~ **[326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

D.4.~~10~~**9** Record Keeping Requirements

(a) To document the compliance status with Condition **D.4.1(d)** ~~D.4.2(c)~~, the Permittee shall maintain monthly records of the amount of DDGS produced.

(b) To document the compliance status with Condition **D.4.6** ~~D.4.7~~, the Permittee shall maintain ~~a daily~~ record**s of daily visible emission notations** ~~of visible emission notations~~ of the baghouse 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 process did not operate that day).

(c) To document the compliance status with Condition **D.4.7** ~~D.4.8~~, the Permittee shall maintain ~~a~~ daily record of the pressure drop across the baghouse ~~controlling the process~~. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the process did not operate that day).

(d) Section C - General Record Keeping Requirements **of this permit** contains the Permittee's obligation with regard to the record~~keeping~~ **required**~~ments~~ **by this condition.** ~~of this requirement.~~

D.4.~~11~~**10** Reporting Requirements

A quarterly **report of DDGS production** ~~summary of the information~~ to document **the** compliance status with Condition **D.4.1(d)** ~~D.4.2(c)~~ 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).** ~~of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS – Ethanol Loading Racks

Facility Description **[326 IAC 2-7-5(14)]**~~[326 IAC 2-8-4(10)]~~:

Emission Limitations and Standards ~~[326 IAC 2-8-4(1)]~~ **[326 IAC 2-7-5(1)]**

D.5.1 **PSD and MACT Minor Limits for VOC, CO, NO_x, and HAP** ~~FESOP Limits~~ [326 IAC 2-2] ~~[326 IAC 2-8-4]~~ [326 IAC 2-4.1]

In order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (MACT) not applicable, ~~Pursuant to 326 IAC 2-8-4 (FESOP),~~ the Permittee shall comply with the following **emission limits for the loading racks EU045A and EU045B**:

(a) The total combined denatured ethanol and blended ethanol load-out from loading racks EU045A and EU045B shall not exceed 64,900,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total denaturant used at the loading racks EU045A and EU045B shall not exceed 4,900,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The blended ethanol shall not exceed a blend of 30% gasoline.

(d) CO emissions from flare (CE009), controlling ethanol loading racks EU045A and EU045B, shall not exceed 0.129 lbs/kgal.

(e) NOx emissions from flare (CE009), controlling ethanol loading racks EU045A and EU045B, shall not exceed 0.077 lbs/kgal.

Compliance with these VOC, CO, and NO_x limits, combined with the potential to emit VOC, CO, and NO_x from other emission units at the source, shall limit the VOC, CO, and NO_x emissions from the entire source to less than 250 tons per twelve (12) consecutive month period and render 326 IAC 2-2 (PSD) not applicable.

Compliance with these HAP limits, combined with the potential to emit HAP from other emission units at the source, shall limit the HAP emissions from the entire source to less than 10 tons per twelve (12) consecutive month period for a single HAP and less than 25 tons per twelve (12) consecutive month period for total HAPs and render 326 IAC 2-4.1 (MACT) not applicable.

~~Compliance with these limits, combined with the limited VOC, CO, NOx, and HAP PTE from other units, the VOC, CO, and NOx, emissions from the entire source shall be limited to less than one hundred (100) tons per year, and the total HAP emissions from the entire source shall be limited to less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for any combination of HAPs. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program) 326 IAC 2-2 (PSD) are not applicable.~~

D.5.3 Preventive Maintenance Plan ~~[326 IAC 2-8-4(9)]~~ **[326 IAC 2-7-5(12)]**

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

D.5.4 VOC and HAP Control

In order to **ensure compliance** ~~comply~~ with Conditions D.5.1 and D.5.2 **for VOC and HAP control**:

***

D.5.5 Testing Requirements [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 8-5-6]

In order to demonstrate compliance with Conditions D.5.1 and D.5.2, the Permittee shall perform VOC (including emission rate, capture efficiency, and destruction efficiency), CO, and NOx testing for enclosed flare CE009 ~~not later than 180 days after issuance of this permit F053-29180-00062,~~ utilizing methods as approved by the Commissioner~~. These tests shall be repeated~~ at least once every five (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.

Compliance Monitoring Requirements ~~[326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]~~ **[326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

Record Keeping and Reporting Requirement ~~[326 IAC 2-8-4(3)] [326 IAC 2-8-16]~~**[326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

D.5.7 Record Keeping Requirements [326 IAC 8-5-6]

***

(e) Section C - General Record Keeping Requirements **of this permit** contains the Permittee's obligation with regard to the recordkeeping requirements of this requirement.

D.5.8 Reporting Requirements

A quarterly **report** ~~summary~~ of the information to document compliance status with Conditions D.5.1(a) ~~D.5.1(b)~~ 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).**~~326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS – Emergency Fire Pump and Biomethanator

Facility Description **[326 IAC 2-7-5(14)]**~~[326 IAC 2-8-4(10)]~~:

Emission Limitations and Standards ~~[326 IAC 2-8-4(1)]~~ **[326 IAC 2-7-5(1)]**

D.6.1 **PSD Minor Limits for CO and NO_x** ~~FESOP Limits [326 IAC 2-8-4]~~[326 IAC 2-2]~~[326 IAC 2-4.1]~~

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, ~~Pursuant to 326 IAC 2-8-4 (FESOP),~~ the Permittee shall comply with the following:

(a) The operating hours for the emergency diesel fire pump (EU034) shall not exceed 500 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The biomethanator flare (CE013) shall not operate when any of the DDGS dryers (EU035 and EU056) are in operation.

Compliance ~~Combined~~ with the**se** CO and NOx **limits, combined with the potential to emit** ~~emissions from other emission units, the~~ CO and NOx **from other** emission **units at the source, shall limit the CO and NOx emissions** from the entire source ~~are each limited to~~ less than ~~100~~ **250** tons~~/yr~~ **per twelve (12) consecutive month period and render** ~~Therefore, the requirements of 326 IAC 2-7 (Part 70 Program) and~~ 326 IAC 2-2 (PSD) ~~are~~ not applicable.

D.6.2 Volatile Organic Compounds (VOC) [326 IAC 8-4-3(d)]

Pursuant to 326 IAC 8-4-3(d) (Petroleum Liquid Storage Facilities), the Permittee shall maintain the following records for a period of two (2) years for tank T003:

(a) The types of volatile petroleum liquid stored;

(b) The maximum true vapor pressure of the liquids as stored; and

(c) The results of the inspections performed on the storage vessels.

The above records shall be made available to the IDEM, OAQ upon written request.

D.6.3 Avoidance Limit for VOC [326 IAC 8-4-6] [326 IAC 8-4-9]

In order to render the requirements of 326 IAC 8-4-6 and 326 IAC 8-4-9 not applicable to the storage tank identified as T008, the monthly gasoline throughput from the storage tank shall not exceed 10,000 gallons per month. Compliance with the above limit will render the requirements of 326 IAC 8-4-6 and 326 IAC 8-4-9 not applicable to the storage tank.

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

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

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

D.6.5 Flare Pilot Flame [326 IAC 8-5-6]

In order to comply with Conditions D.6.1, the Permittee shall monitor the presence of a flare pilot flame using a thermocouple or any other equivalent device to detect the presence of a flame when the biomethanator is in operation.

Record Keeping and Reporting Requirement ~~[326 IAC 2-8-4(3)] [326 IAC 2-8-16]~~ **[326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

D.6.~~2~~**6** Record Keeping Requirements

(a) ***

(b) To document the compliance status with Condition D.6.2, the Permittee shall maintain the following records for a period of two (2) years for tank T003:

(1) The types of volatile petroleum liquid stored;

(2) The maximum true vapor pressure of the liquids as stored; and

(3) The results of the inspections performed on the storage vessels.

(c) To document the compliance status with Condition D.6.3, the Permittee shall maintain monthly records of the gasoline throughput from the storage tank identified as T008.

(~~b~~**d**) Section C - General Record Keeping Requirements **of this permit** contains the Permittee's obligation with regard to the recordkeeping requirements of this requirement.

D.6.~~3~~**7** Reporting Requirements

A quarterly **report** ~~summary~~ of the information to document compliance with Condition D.6.1(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).** ~~326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS – Non-Fuel Grade Ethanol

Emissions Unit Description [326 IAC 2-7-5(14)]:

(n) One (1) distillation process, approved in 2013 for construction, with a maximum throughput rate of 40,000 gallons of non-fuel grade ethanol per hour, consisting of the following:

(1) Three (3) distillation columns and seven (7) condensers operating in a close loop.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(2) Two (2) liquid storage tanks, identified as T013 and T014, each with a maximum capacity of 500,000 gallons.

Under 40 CFR 60, Subpart Kb, T013 and T014 are affected facilities.

(3) Three (3) liquid storage tanks, identified as T015, T016, and T017, each with a maximum capacity of 24,000 gallons.

Under 40 CFR 60, Subpart Kb, T015, T016, and T017 are affected facilities.

(4) Two (2) natural gas fired boilers, identified as Boiler #1 (EU081) and Boiler #2 (EU082), each with a maximum heat input rate of 48.16 MMBtu/hr, exhausting uncontrolled to stacks EP020 and EP021, respectively.

Under 40 CFR 60, Subpart Dc, EU081 and EU082 are affected facilities.

(o) One (1) non-fuel grade ethanol loading skid for trucks, identified as EU083, approved in 2013 for construction, with a maximum throughput rate of 1000 gallons per minute. The truck loading process is controlled by the enclosed flare CE019, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP019.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

(p) One (1) non-fuel grade ethanol loading skid for railcars, identified as EU084, approved in 2013 for construction, with a maximum throughput rate of 1667 gallons per minute. The railcar loading process is controlled by the enclosed flare CE019, which is fueled by natural gas and has a maximum heat input capacity of 10.0 MMBtu/hr, and exhausts through stack EP019.

Under NSPS, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered to be affected facilities.

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

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

D.7.1 Minor Limits for VOC, CO, NO_x, and HAP [326 IAC 2-2] [326 IAC 2-4.1] [Clean Air Act, Section 112(a)(1) and (a)(2)]

In order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (MACT) not applicable, the Permittee shall comply with the following emission limits for the loading skids EU083 and EU084:

(a) The potential emissions of cumulative HAPs shall be limited to no more than 3.85 tons per year from Tanks T013 through T017 and shall be limited to any single HAP or combination of these HAPs: benzene, chloroform, dimethyl phthalate, methyl isobutyl ketone, and toluene.

(b) The total combined non-fuel grade ethanol load-out from loading skids EU083 and EU084 shall not exceed 60,000,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) CO emissions from flare CE019, controlling ethanol loading skids EU083 and EU084, shall not exceed 0.129 lb/kgal.

(d) NO_x emissions from flare CE019, controlling ethanol loading skids EU083 and EU084, shall not exceed 0.077 lb/kgal.

Compliance with these VOC, CO, and NO_x limits, combined with the potential to emit VOC, CO, and NO_x from other emission units at the source, shall limit the VOC, CO, and NO_x emissions from the entire source to less than 250 tons per twelve (12) consecutive month period and render 326 IAC 2-2 (PSD) not applicable.

Compliance with these HAP limits, combined with the potential to emit HAP from other emission units at the source, shall limit the HAP emissions from the entire source to less than 10 tons per twelve (12) consecutive month period for a single HAP and less than 25 tons per twelve (12) consecutive month period for total HAPs and render 326 IAC 2-4.1 (MACT) not applicable.

D.7.2 Particulate Emissions [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from the 48.16 MMBtu/hr Boiler #1 (EU081) and Boiler #2 (EU082) shall be limited to 0.26 pounds per MMBtu heat input, each.

The limit was calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}} = \frac{1.09}{(231.32)^{0.26}} = 0.26 \text{ lb/MMBtu}$$

Where: Pt = emission rate limit (lb/MMBtu)
Q = total source heat input capacity (MMBtu/hr)

D.7.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.7.4 VOC and HAP Control

In order to comply with Condition D.7.1 for VOC and HAP control:

(a) Enclosed flare CE019 shall be in operation and control emissions from the non-fuel grade ethanol loading skids (EU083 and EU084) at all times when these skids are in operation.

(b) The ethanol loading skids (EU083 and EU084) shall utilize submerged loading method.

(c) The railcars and trucks shall not use vapor balance services.

D.7.5 VOC and HAP

In order to determine compliance with the VOC and HAP emissions limits in Condition D.7.1(a), the VOC and HAP emissions from the tank storage and tank filling of Tanks T013 through T017 shall be calculated using USEPA's TANKS program (version 4.0 or its updates).

D.7.6 Testing Requirements [326 IAC 2-1.1-11]

Not later than 180 days after the startup of the closed-loop distillation process, the Permittee shall perform VOC (including emission rate, capture efficiency, and destruction efficiency), CO, and NO_x testing of enclosed flare CE019 utilizing methods as approved by the Commissioner at least once every five (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.

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

D.7.7 Flare Pilot Flame

In order to comply with Condition D.7.1, the Permittee shall monitor the presence of a flare pilot flame using a thermocouple or any other equivalent device to detect the presence of a flame when ethanol loading skids EU083 and/or EU084 are in operation.

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

D.7.8 Record Keeping Requirements

(a) To document the compliance status with Condition D.7.1(b), the Permittee shall maintain monthly records of the total amount of non-fuel grade ethanol loaded out from loading racks EU083 and EU084.

(b) To document the compliance status with Condition D.7.6, the Permittee shall maintain records of temperature or other parameters sufficient to demonstrate the presence of a pilot flame when loading skids EU083 and/or EU084 are in operation.

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

D.7.9 Reporting Requirements

A quarterly report of the non-fuel grade ethanol loading to document the compliance status with Condition D.7.1(b) 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 obligations 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 E.1 FACILITY OPERATION CONDITIONS - 40 CFR 60, Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

Facility Description **[326 IAC 2-7-5(14)]**~~[326 IAC 2-8-4(10)]~~:

SECTION E.2 FACILITY OPERATION CONDITIONS - 40 CFR 60, Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006

Facility Description **[326 IAC 2-7-5(14)]**~~[326 IAC 2-8-4(10)]~~:

SECTION E.3 FACILITY OPERATION CONDITIONS - 40 CFR 60, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984

Facility Description **[326 IAC 2-7-5(14)]**~~[326 IAC 2-8-4(10)]~~:

SECTION E.4 FACILITY OPERATION CONDITIONS – 40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Facility Description **[326 IAC 2-7-5(14)]**~~[326 IAC 2-8-4(10)]~~:

***

PART 70 OPERATING PERMIT
~~FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)~~
CERTIFICATION

***

PART 70 OPERATING PERMIT
~~FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP~~)
EMERGENCY OCCURRENCE REPORT

***

~~FESOP~~**Part 70** Permit No.: ~~F053-29180-00062~~ **T053-32070-0068**

***

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: **Central Indiana Ethanol, LLC**
Source Address: **2955 West Delphi Pike, Marion, Indiana 46952**
Part 70 Permit No.: **T053-32070-00062**
Facility: **Loading Racks (EU083 and EU084)**
Parameter: **Total combined non-fuel grade ethanol loadout rate**
Limit: **The total combined non-fuel grade ethanol load-out from loading skids EU083 and EU084 shall not exceed 60,000,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.**

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: _____

***

~~FESOP Quarterly Report~~ **Part 70 Quarterly Report**

***

~~FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)~~
PART 70 OPERATING PERMIT

QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

***

~~Mail to: Permit Administration and Support Section~~
~~Office of Air Quality~~
~~100 North Senate Avenue~~
~~MC 61-53 IGCN 1003~~
~~Indianapolis, Indiana 46204-2251~~

~~Central Indiana Ethanol, LLC~~
~~2955 West Delphi Pike~~
~~Marion, Indiana 46952~~

~~Affidavit of Construction~~

~~I, _____, being duly sworn upon my oath, depose and say:~~
~~(Name of the Authorized Representative)~~

~~1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.~~

~~2. I hold the position of _____ for _____.~~
~~(Title) (Company Name)~~

~~3. By virtue of my position with _____, I have personal~~
~~(Company Name)~~
~~knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____.~~
~~(Company Name)~~

~~4. I hereby certify that Central Indiana Ethanol, LLC 2955 West Delphi Pike, Marion, Indiana 46952, completed construction of the ethanol production plant on _____ in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on April 19, 2010 and as permitted pursuant to New Source Construction Permit and Federally Enforceable State Operating Permit No. F053-29180-00062, Plant ID No. 053-00062 issued on _____.~~

~~5. **Permittee, please cross out the following statement if it does not apply:** Additional (operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit.~~

~~Further Affiant said not.~~

~~I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.~~

~~Signature _____~~
~~Date _____~~

~~STATE OF INDIANA)~~
~~_____)SS~~

~~COUNTY OF _____)~~

~~Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana on this _____ day of _____, 20 _____. My Commission expires: _____.~~

~~Signature _____~~
~~Name _____ (typed or printed)~~

Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 053-32519-00062 and Part 70 Operating Permit No. T053-32070-00062. The staff recommends to the Commissioner that this Part 70

Significant Source Modification and Part 70 Operating Permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on June 29, 2012. Additional information was received on November 15, 2012; December 4, 2012; December 11, 2012; January 18, 2013.

Conclusion

The operation of this stationary ethanol production plant, capable of producing both dried distillers grain solubles (DDGS) and wet distillers grain solubles (WDGS) shall be subject to the conditions of the attached Part 70 Operating Permit No. T053-32070-00062.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Julie Alexander 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) 3-1782 or toll free at 1-800-451-6027 extension 3-1782.

(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's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Appendix A: Emission Calculations
Emissions Summary
Uncontrolled Potential to Emit

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

Process, Emission Units, Stack	Control Device	Potential to Emit Before Control (tons/yr)									
		PM	PM_{10}	$PM_{2.5}$	SO_2	VOC	CO	NO_x	GHGs as CO_2e	Total HAPs	Worst HAP
Grain Receiving and Handling (EU001 - EU007, EU064) (EP001)	CE001	732.09	732.09	124.45	-	-	-	-	-	-	-
Hammermills (EU010, EU011, and EU067) (EP003)	CE003	525.60	525.60	89.35	-	-	-	-	-	-	-
DDGS Handling and Loadout (EU040 - EU043) (EP008)	CE008	70.39	70.39	11.97	-	-	-	-	-	-	-
DDGS Cooler (EU036) (EP014)	CE014	227.50	227.50	38.68	-	9.68	-	-	-	0.53	0.33
Corn Storage Bin (EU066)	N/A	64.39	14.35	2.44	-	-	-	-	-	-	-
Truck & Railcar Unloading Areas (EU070 & EU073) & Storage Bins (EU076 &	CE015	3.54	3.54	3.54	-	-	-	-	-	-	-
Process Feed Area Surge Hoppers (EU078 & EU079)	CE017	1.44	1.44	1.44	-	-	-	-	-	-	-
Truck Unloading Area (EU080)	CE018	0.84	0.84	0.84	-	-	-	-	-	-	-
Fermentation Scrubber (EU016 through EU020) (EP005)	CE005	-	-	-	-	1,434.45	-	-	-	0.47	0.26
Fermentation Scrubber (EU016 through EU020) (EP010)	CE010	-	-	-	-	98.55	-	-	-	0.21	0.00
DDGS Dryers (EU035 and EU056) & TO/HSRG (EU014, EU015, EU021 through EU029, EU049 through EU055, EU058, EU059, EU068 and EU069) (EP007) *	CE006 / CE007	0.73	2.94	2.94	0.23	2.13	32.46	31.57	116,647	0.75	-
		1.10	4.41	4.41	0.35	3.19	48.70	46.38		1.13	-
		171.58	171.58	171.58	210.24	1,256.37	612.76	0.00	-	35.48	6.13
Ethanol Loadout & Flare (EU045A and EU045B) (EP009) **	CE009	negl.	negl.	negl.	negl.	1,208.80	27.12	16.19	5,184	70.40	-
Fire Pump (EU034) (EP006)	N/A	0.07	0.17	0.17	0.04	0.19	0.43	1.29	86	0.00	0.00
Biomethanator Flare (EU048) (EP013)	CE013	negl.	negl.	negl.	negl.	1.37	9.72	1.79	3,111	0.05	-
Space Heaters	N/A	0.02	0.08	0.08	0.01	0.06	0.90	1.07	1,296	0.02	-
EPCO Plant - Space Heaters	N/A	0.01	0.02	0.02	negl.	0.01	0.23	0.27	327	0.01	-
Total Existing Emission Units	**-**	**1,799.30**	**1,754.95**	**451.91**	**210.86**	**4,014.79**	**732.32**	**98.56**	**126,651**	**109.05**	**6.73**
Proposed Modification - NonFuel Grade Ethanol											
Boiler #1 (EU081) (EP020) & Boiler #2 (EU082) (EP021)	N/A	0.79	3.14	3.14	0.25	2.27	34.74	41.36	49,935	0.78	-
Non-Fuel Grade Ethanol Loadout Skids & Flare (EU083 & EU084) (EP019) ***	CE019	negl.	negl.	negl.	negl.	63.53	22.60	13.49	5,184	0.08	-
Total Proposed NonFuel Grade Ethanol	**-**	**0.79**	**3.14**	**3.14**	**0.25**	**65.81**	**57.34**	**54.85**	**55,119**	**0.86**	**-**
Source Total after NonFuel Grade Ethanol Modification	**-**	**1800.09**	**1758.09**	**455.05**	**211.11**	**4080.60**	**789.67**	**153.41**	**181,770**	**109.91**	**6.73**
Proposed Modification - Pneumatic Conveyance System											
Fork Truck Unloading Area (EU075)	CE022	24.92	24.92	24.92	-	-	-	-	-	-	-
	CE016	2.77	2.77	2.77	-	-	-	-	-	-	-
Total Proposed Pneumatic Conveyance System	**-**	**27.69**	**27.69**	**27.69**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
SOURCE TOTAL (PSD Applicability)	**-**	**1,827.78**	**1,785.78**	**482.74**	**211.11**	**4,080.60**	**789.67**	**153.41**	**181,770**	**109.91**	**6.73**
Fugitive Emissions											
Uncaptured Emissions From Grain Receiving (F001)	N/A	2.26	0.50	0.50	-	-	-	-	-	-	-
Truck Traffic (F002)	N/A	8.36	1.71	0.40	-	-	-	-	-	-	-
Truck Traffic - EPCO Plant (F002)	N/A	1.01	0.20	0.05	-	-	-	-	-	-	-
Equipment Leaks (F003)	N/A	-	-	-	-	13.20	-	-	-	2.62	0.01
Cooling Tower (F004)	N/A	9.05	9.05	9.05	-	-	-	-	-	-	-
Cooling Tower - EPCO Plant (F004)	N/A	0.25	0.25	0.25	-	-	-	-	-	-	-
Corn Oil Storage (EU061 and EU062) (F005)	N/A	-	-	-	-	0.54	-	-	-	0.29	negl.
Storage Tanks (T001 - T010)	N/A	-	-	-	-	4.33	-	-	-	-	-
Total Existing Fugitives	**-**	**20.93**	**11.71**	**10.25**	**0.00**	**18.07**	**0.00**	**0.00**	**0**	**2.91**	**0.01**
Proposed Modification - NonFuel Grade Ethanol											
Equipment Leaks - NonFuel Grade Ethanol Distillation Process (F003)	N/A	-	-	-	-	11.35	-	-	-	0.67	-
Cooling Tower - NonFuel Grade Ethanol Distillation Process (F004)	N/A	5.76	5.76	5.76	-	-	-	-	-	-	1.95
Storage Tanks (T013 - T017)	N/A	-	-	-	-	3.85	-	-	-	3.85	-
Total Proposed Fugitives	**-**	**5.76**	**5.76**	**5.76**	**0.00**	**15.19**	**0.00**	**0.00**	**0**	**4.52**	**1.95**
SOURCE TOTAL (FUGITIVES)	**-**	**26.69**	**17.47**	**16.00**	**0.00**	**33.26**	**0.00**	**0.00**	**0**	**7.43**	**1.96**
SOURCE TOTAL (Part 70 Applicability)	**-**	**1,827.78**	**1,785.78**	**482.74**	**211.11**	**4,080.60**	**789.67**	**153.41**	**181,770**	**109.91**	**6.73**

Notes:

Non-HAP fugitive emissions are not counted toward the determination of Part 70, PSD, or Emission Offset applicability.

HAP fugitive emissions are counted only toward the determination of Part 70 applicability.

* These totals include the combustion emissions and the process emissions from both the DDGS dryers and the TO/HSRG.

** These totals include the combustion emissions and the process emissions from the ethanol loadout and flare.

*** These totals include the combustion emissions and the process emissions from the non-fuel grade ethanol loadout and flare.

Appendix A: Emission Calculations
Emissions Summary
Controlled Potential to Emit

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

Process, Emission Units, Stack	Control Device	Potential to Emit Before Control (tons/yr)									
		PM	PM_{10}	$PM_{2.5}$	SO_2	VOC	CO	NO_x	GHGs as CO_2e	Total HAPs	Worst HAP
Grain Receiving and Handling (EU001 - EU007, EU064) (EP001)	CE001	7.32	7.32	1.24	-	-	-	-	-	-	-
Hammermills (EU010, EU011, and EU067) (EP003)	CE003	5.26	5.26	0.89	-	-	-	-	-	-	-
DDGS Handling and Loadout (EU040 - EU043) (EP008)	CE008	0.70	0.70	0.12	-	-	-	-	-	-	-
DDGS Cooler (EU036) (EP014)	CE014	2.28	2.28	0.39	-	9.68	-	-	-	0.53	0.33
Corn Storage Bin (EU066)	N/A	64.39	14.35	2.44	-	-	-	-	-	-	-
Truck & Railcar Unloading Areas (EU070 & EU073) & Storage Bins (EU076 &	CE015	3.54E-03	3.54E-03	6.02E-04	-	-	-	-	-	-	-
Process Feed Area Surge Hoppers (EU078 & EU079)	CE017	1.44E-03	1.44E-03	2.45E-04	-	-	-	-	-	-	-
Truck Unloading Area (EU080)	CE018	8.42E-04	8.42E-04	1.43E-04	-	-	-	-	-	-	-
Fermentation Scrubber (EU016 through EU020) (EP005)	CE005	-	-	-	-	5.74	-	-	-	0.24	0.13
Fermentation Scrubber (EU016 through EU020) (EP010)	CE010	-	-	-	-	0.04	-	-	-	0.11	1.75E-03
DDGS Dryers (EU035 and EU056) & TO/HSRG (EU014, EU015, EU021 through EU029, EU049 through EU055, EU058, EU059, EU068 and EU069) (EP007)	CE006 / CE007	0.73	2.94	2.94	1.27	4.77	61.28	42.22	116,647	0.75	-
		1.10	4.41	4.41						1.13	-
		17.16	17.16	17.16					-	3.55	0.61
Ethanol Loadout & Flare (EU045A and EU045B) (EP009)	CE009	negl.	negl.	negl.	negl.	24.18	27.12	16.19	5,184	1.41	-
Fire Pump (EU034) (EP006)	N/A	0.07	0.17	0.17	0.04	0.19	0.43	1.29	86	0.00	0.00
Biomethanator Flare (EU048) (EP013)	CE013	negl.	negl.	negl.	negl.	1.37	9.72	1.79	3,111	0.05	-
Space Heaters	N/A	0.02	0.08	0.08	0.01	0.06	0.90	1.07	1,296	0.02	-
Total Existing Emission Units	-	**99.03**	**54.66**	**29.83**	**1.32**	**46.02**	**99.45**	**62.56**	**126,324**	**7.77**	**1.08**
Proposed Modification - NonFuel Grade Ethanol											
Boiler #1 (EU081) (EP020) & Boiler #2 (EU082) (EP021)	N/A	0.79	3.14	3.14	0.25	2.27	34.74	41.36	49,935	0.78	-
Non-Fuel Grade Ethanol Loadout Skids & Flare (EU083 & EU084) (EP019)	CE019	negl.	negl.	negl.	negl.	1.27	22.60	13.49	5,184	0.15	-
Total Proposed Emission Units	**-**	**0.79**	**3.14**	**3.14**	**0.25**	**3.55**	**57.34**	**54.85**	**55,119**	**0.94**	**-**
Source Total after NonFuel Grade Ethanol Modification	**-**	**99.81**	**57.80**	**32.98**	**1.56**	**49.57**	**156.80**	**117.41**	**181443.47**	**8.71**	**1.08**
Proposed Modification - Pneumatic Conveyance System											
Fork Truck Unloading Area (EU075)	CE022	2.49E-02	2.49E-02	4.24E-03	-	-	-	-	-	-	-
	CE016	2.77E-03	2.77E-03	4.71E-04	-	-	-	-	-	-	-
Total Proposed Pneumatic Conveyance System	**-**	**2.77E-02**	**2.77E-02**	**4.71E-03**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
SOURCE TOTAL (PSD Applicability)	**-**	**99.84**	**57.83**	**32.98**	**1.56**	**49.57**	**156.80**	**117.41**	**181,443**	**8.71**	**1.08**
Fugitive Emissions											
Uncaptured Emissions From Grain Receiving (F001)	N/A	2.26	0.50	0.50	-	-	-	-	-	-	-
Truck Traffic (F002)	N/A	4.18	0.86	0.20	-	-	-	-	-	-	-
Truck Traffic - EPCO Plant (F002)	N/A	0.50	0.10	0.02	-	-	-	-	-	-	-
Equipment Leaks (F003)	N/A	-	-	-	-	13.20	-	-	-	0.78	negl.
Cooling Tower (F004)	N/A	9.05	9.05	9.05	-	-	-	-	-	-	-
Cooling Tower - EPCO Plant (F004)	N/A	0.25	0.25	0.25	-	-	-	-	-	-	-
Corn Oil Storage (EU061 and EU062) (F005)	N/A	-	-	-	-	0.54	-	-	-	0.29	negl.
Storage Tanks (T001 - T010)	N/A	-	-	-	-	4.33	-	-	-	-	-
Total Existing Fugitives	**-**	**16.24**	**10.76**	**10.02**	**0.00**	**18.07**	**0.00**	**0.00**	**0**	**1.07**	**negl.**
Proposed Modification - NonFuel Grade Ethanol											
Equipment Leaks - NonFuel Grade Ethanol Distillation Process (F003)	N/A	-	-	-	-	3.39	-	-	-	0.20	2.64E-03
Cooling Tower - NonFuel Grade Ethanol Distillation Process (F004)	N/A	5.76	5.76	5.76	-	-	-	-	-	-	-
Storage Tanks (T013 - T017)	N/A	-	-	-	-	3.85	-	-	-	3.85	-
Total Proposed Fugitives	**-**	**5.76**	**5.76**	**5.76**	**-**	**7.24**	**-**	**-**	**-**	**4.05**	**2.64E-03**
SOURCE TOTAL (FUGITIVES)	**-**	**22.00**	**16.51**	**15.78**	**0.00**	**25.31**	**0.00**	**0.00**	**0**	**5.12**	**2.64E-03**
SOURCE TOTAL (Part 70 Applicability)	**-**	**99.84**	**57.83**	**32.98**	**1.56**	**49.57**	**156.80**	**117.41**	**181,443**	**8.71**	**1.08**

Notes:
Non-HAP fugitive emissions are not counted toward the determination of Part 70, PSD, or Emission Offset applicability.
HAP fugitive emissions are counted only toward the determination of Part 70 applicability.

Appendix A: Emission Calculations
Emissions Summary
Potential to Emit After Issuance of Permit (Limited PTE)

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

Process, Emission Units, Stack	Control Device	Potential to Emit Before Control (tons/yr)									
		PM	PM_{10}	$PM_{2.5}$	SO_2	VOC	CO	NO_x	GHGs as CO_2e	Total HAPs	Worst HAP
Grain Receiving and Handling (EU001 - EU007, EU064) (EP001)	CE001	7.31	7.31	7.31	-	-	-	-	-	-	-
Hammermills (EU010, EU011, and EU067) (EP003)	CE003	5.26	5.26	5.26	-	-	-	-	-	-	-
DDGS Handling and Loadout (EU040 - EU043) (EP008)	CE008	0.70	0.70	0.70	-	-	-	-	-	-	-
DDGS Cooler (EU036) (EP014)	CE014	4.12	4.12	4.12	-	6.83	-	-	-	0.53	0.33
Corn Storage Bin (EU066)	N/A	64.39	14.35	2.44	-	-	-	-	-	-	-
Truck & Railcar Unloading Areas (EU070 & EU073) & Storage Bins (EU076 & EU077)	CE015	3.54	3.54	3.54	-	-	-	-	-	-	-
Process Feed Area Surge Hoppers (EU078 & EU079)	CE017	1.44	1.44	1.44	-	-	-	-	-	-	-
Truck Unloading Area (EU080)	CE018	0.84	0.84	0.84	-	-	-	-	-	-	-
Fermentation Scrubber (EU016 through EU020) (EP005)	CE005	-	-	-	-	41.61	-	-	-	8.37	8.23
Fermentation Scrubber (EU016 through EU020) (EP010)	CE010	-	-	-	-	2.72	-	-	-	0.57	0.50
DDGS Dryers (EU035 and EU056) & TO/HSRG (EU014, EU015, EU021 through EU029, EU049 through EU055, EU058, EU059, EU068 and EU069) (EP007)	CE006 / CE007	35.04	35.04	35.04	37.23	22.56	91.98	86.29	116,647 -	2.32	0.79
Ethanol Loadout & Flare (EU045A and EU045B) (EP009)	CE009	negl.	negl.	negl.	negl.	3.23	4.19	2.50	5,184	0.19	-
Fire Pump (EU034) (EP006)	N/A	0.07	0.17	0.17	0.04	0.19	0.43	1.29	86	0.00	4.03E-04
Biomethanator Flare (EU048) (EP013)	CE013	*see note									
Space Heaters	N/A	0.02	0.08	0.08	0.01	0.06	0.90	1.07	1,296	0.02	-
Total Existing Emission Units	**-**	**122.73**	**72.85**	**60.94**	**37.27**	**77.19**	**97.50**	**91.15**	**123,213**	**11.99**	**9.85**
Proposed Modification - NonFuel Grade Ethanol											
Boiler #1 (EU081) (EP020) & Boiler #2 (EU082) (EP021)	N/A	0.79	3.14	3.14	0.25	2.27	34.74	41.36	49,935	0.78	-
Non-Fuel Grade Ethanol Loadout Skids & Flare (EU083 & EU084) (EP019)	CE019	negl.	negl.	negl.	negl.	0.22	3.87	2.31	5,184	0.09	-
Total Proposed Emission Units	**-**	**0.79**	**3.14**	**3.14**	**0.25**	**2.49**	**38.61**	**43.67**	**55,119**	**0.87**	**-**
Source Total after NonFuel Grade Ethanol Modification	**-**	**123.51**	**75.99**	**64.08**	**37.52**	**79.68**	**136.11**	**134.82**	**178,333**	**12.87**	**9.85**
Proposed Modification - Pneumatic Conveyance System											
Fork Truck Unloading Area (EU075)	CE022	2.49E-02	2.49E-02	4.24E-03	-	-	-	-	-	-	-
	CE016	2.77	2.77	2.77	-	-	-	-	-	-	-
Total Proposed Pneumatic Conveyance System	**-**	**2.79**	**2.79**	**2.77**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
SOURCE TOTAL (PSD Applicability)	**-**	**126.31**	**78.79**	**66.86**	**37.52**	**79.68**	**136.11**	**134.82**	**178,333**	**12.87**	**9.85**
Fugitive Emissions											
Uncaptured Emissions From Grain Receiving (F001)	N/A	2.26	0.50	0.50	-	-	-	-	-	-	-
Truck Traffic (F002)	N/A	4.18	0.86	0.20	-	-	-	-	-	-	-
Truck Traffic - EPCO Plant (F002)	N/A	0.50	0.10	0.02	-	-	-	-	-	-	-
Equipment Leaks (F003)	N/A	-	-	-	-	13.20	-	-	-	0.78	negl.
Cooling Tower (F004)	N/A	9.05	9.05	9.05	-	-	-	-	-	-	-
Cooling Tower - EPCO Plant (F004)	N/A	0.25	0.25	0.25	-	-	-	-	-	-	-
Corn Oil Storage (EU061 and EU062) (F005)	N/A	-	-	-	-	0.54	-	-	-	0.29	negl.
Storage Tanks (T001 - T010)	N/A	-	-	-	-	4.33	-	-	-	-	-
Total Existing Fugitives	**-**	**16.24**	**10.76**	**10.02**	**-**	**18.07**	**-**	**-**	**-**	**1.07**	**-**
Proposed Modification - NonFuel Grade Ethanol											
Equipment Leaks - NonFuel Grade Ethanol Distillation Process (F003)	N/A	-	-	-	-	3.39	-	-	-	0.20	-
Cooling Towers - NonFuel Grade Ethanol Distillation Process (F004)	N/A	5.76	5.76	5.76	-	-	-	-	-	-	-
Storage Tanks (T013 - T017)	N/A	-	-	-	-	3.85	-	-	-	3.85	-
Total Proposed Fugitives	**-**	**5.76**	**5.76**	**5.76**	**-**	**7.24**	**-**	**-**	**-**	**4.05**	**-**
SOURCE TOTAL (FUGITIVES)	**-**	**22.00**	**16.51**	**15.78**	**0.00**	**25.31**	**0.00**	**0.00**	**0**	**5.12**	**negl.**
SOURCE TOTAL (Part 70 Applicability)	**-**	**126.31**	**78.79**	**66.86**	**37.52**	**79.68**	**136.11**	**134.82**	**178,333**	**12.87**	**9.85**

Notes:
Non-HAP fugitive emissions are not counted toward the determination of Part 70, PSD, or Emission Offset applicability.
HAP fugitive emissions are counted only toward the determination of Part 70 applicability.
* The biomethanator flare only operates when the DDGS dryers are down. The operation of the DDGS dryers is the worst case scenario for emissions, and the emissions from the DDGS dryers have been included in the total PTE.

Appendix A: Emission Calculations
HAP Emissions Summary
Uncontrolled Potential to Emit

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

Process, Emission Units, Stack	Control Device	Potential to Emit Before Control (tons/yr)										
		Acetaldehyde	Acrolein	Benzene	Chloroform	Dimethyl Phthalate	Formaldehyde	Hexane	Methanol	Methyl Isobutyl Ketone	Toluene	Total HAPs
Grain Receiving and Handling (EU001 - EU007, EU064) (EP001)	CE001	-	-	-	-	-	-	-	-	-	-	-
Hammermills (EU010, EU011, and EU067) (EP003)	CE003	-	-	-	-	-	-	-	-	-	-	-
DDGS Handling and Loadout (EU040 - EU043) (EP008)	CE008	-	-	-	-	-	-	-	-	-	-	-
DDGS Cooler (EU036) (EP014)	CE014	0.33	0.07	-	-	-	0.07	-	0.07	-	-	0.53
Corn Storage Bin (EU066)	N/A	-	-	-	-	-	-	-	-	-	-	-
Truck & Railcar Unloading Areas (EU070 & EU073) & Storage Bins (EU076 &	CE015	-	-	-	-	-	-	-	-	-	-	-
Process Feed Area Surge Hoppers (EU078 & EU079)	CE017	-	-	-	-	-	-	-	-	-	-	-
Truck Unloading Area (EU080)	CE018	-	-	-	-	-	-	-	-	-	-	-
Fermentation Scrubber (EU016 through EU020) (EP005)	CE005	0.26	0.09	-	-	-	0.04	-	0.09	-	-	0.47
Fermentation Scrubber (EU016 through EU020) (EP010)	CE010	1.75E-03	0.09	-	-	-	0.04	-	0.09	-	-	0.21
DDGS Dryers (EU035 and EU056) & TO/HSRG (EU014, EU015, EU021 through EU029, EU049 through EU055, EU058, EU059, EU068 and EU069) (EP007) *	CE006 / CE007	-	-	negl.	-	-	0.03	0.71	-	-	negl.	0.75
		-	-	negl.	-	-	0.04	1.06	-	-	negl.	1.13
		6.13	3.94	-	-	-	4.38	-	3.07	-	-	35.48
Ethanol Loadout & Flare (EU045A and EU045B) (EP009) **	CE009	-	-	3.02	-	-	negl.	60.52	-	-	6.04	70.40
Fire Pump (EU034) (EP006)	N/A	4.03E-04	4.86E-05	4.90E-04	-	-	6.20E-04	-	-	-	2.15E-04	2.08E-03
Biomethanator Flare (EU048) (EP013)	CE013	-	-	negl.	-	-	negl.	0.05	-	-	negl.	0.05
Space Heaters	N/A	-	-	negl.	-	-	negl.	0.02	-	-	negl.	0.02
EPCO Plant - Space Heaters	N/A	-	-	negl.	-	-	negl.	negl.	-	-	negl.	0.01
Total Existing Emission Units	**-**	**6.73**	**4.18**	**3.02**	**0.00**	**0.00**	**4.59**	**62.36**	**3.31**	**0.00**	**6.04**	**109.05**
Proposed Modification - NonFuel Grade Ethanol												
Boiler #1 (EU081) (EP020) & Boiler #2 (EU082) (EP021)	N/A	-	-	negl.	-	-	0.03	0.74	-	-	negl.	0.78
Non-Fuel Grade Ethanol Loadout Skids & Flare (EU083 & EU084) (EP019) ***	CE019	-	-	0.16	-	-	negl.	3.25	-	-	0.32	0.08
Total Proposed Emission Units	**-**	**0.00**	**0.00**	**0.16**	**0.00**	**0.00**	**0.03**	**4.00**	**0.00**	**0.00**	**0.32**	**0.86**
Proposed Modification - Pneumatic Conveyance System												
Fork Truck Unloading Area (EU075)	CE016	-	-	-	-	-	-	-	-	-	-	-
	CE022	-	-	-	-	-	-	-	-	-	-	-
Total Proposed Emission Units	**-**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
SOURCE TOTAL (PSD Applicability)	**-**	**6.73**	**4.18**	**3.18**	**0.00**	**0.00**	**4.62**	**66.36**	**3.31**	**0.00**	**6.36**	**109.91**
Fugitive Emissions												
Uncaptured Emissions From Grain Receiving (F001)	N/A	-	-	-	-	-	-	-	-	-	-	-
Truck Traffic (F002)	N/A	-	-	-	-	-	-	-	-	-	-	-
Truck Traffic - EPCO Plant (F002)	N/A	-	-	-	-	-	-	-	-	-	-	-
Equipment Leaks (F003)	N/A	0.01	-	0.11	-	-	-	2.21	0.01	-	0.22	2.62
Cooling Tower (F004)	N/A	-	-	-	-	-	-	-	-	-	-	-
Cooling Tower - EPCO Plant (F004)	N/A	-	-	-	-	-	-	-	-	-	-	-
Corn Oil Storage (EU061 and EU062) (F005)	N/A	negl.	negl.	-	-	-	negl.	-	0.06	-	-	0.29
Storage Tanks (T001 - T010)	N/A	-	-	-	-	-	-	-	-	-	-	-
Total Existing Fugitives	**-**	**0.01**	**0.00**	**0.11**	**0.00**	**0.00**	**0.00**	**2.21**	**0.07**	**0.00**	**0.22**	**2.91**
Proposed Modification												
Equipment Leaks - NonFuel Grade Ethanol Distillation Process (F003)	N/A	2.64E-03	-	0.03	-	-	-	0.57	negl.	-	0.06	0.67
Cooling Tower - NonFuel Grade Ethanol Distillation Process (F004)	N/A	-	-	-	-	-	-	-	-	-	-	-
Storage Tanks (T013 - T017) (a)	N/A	-	-	1.95	1.95	1.95	-	-	-	1.95	1.95	3.85
Total Proposed Fugitives	**-**	**2.64E-03**	**0.00**	**1.98**	**1.95**	**1.95**	**0.00**	**0.57**	**negl.**	**1.95**	**2.01**	**4.52**
SOURCE TOTAL (FUGITIVES)	**-**	**0.01**	**0.00**	**2.09**	**1.95**	**1.95**	**0.00**	**2.77**	**7.01E-02**	**1.95**	**2.23**	**7.43**
SOURCE TOTAL (Part 70 Applicability)	**-**	**6.74**	**4.18**	**5.27**	**1.95**	**1.95**	**4.62**	**69.13**	**3.38**	**1.95**	**8.59**	**117.34**

Notes:

Non-HAP fugitive emissions are not counted toward the determination of Part 70, PSD, or Emission Offset applicability.

HAP fugitive emissions are counted only toward the determination of Part 70 applicability.

(a) The potential HAPs from the tanks will be limited to any one of these HAPs or a combination of these HAPs: benzene, chloroform, dimethyl phthalate, methyl idobutyl ketone, and toluene.

* These totals include the combustion emissions and the process emissions from both the DDGS dryers and the TO/HSRG.

** These totals include the combustion emissions and the process emissions from the ethanol loadout and flare.

*** These totals include the combustion emissions and the process emissions from the non-fuel grade ethanol loadout and flare.

Appendix A: Emission Calculations
HAP Emissions Summary
Controlled Potential to Emit

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

Process, Emission Units, Stack	Control Device	Potential to Emit After Control (tons/yr)										
		Acetaldehyde	Acrolein	Benzene	Chloroform	Dimethyl Phthalate	Formaldehyde	Hexane	Methanol	Methyl Isobutyl Ketone	Toluene	Total HAPs
Grain Receiving and Handling (EU001 - EU007, EU064) (EP001)	CE001	-	-	-	-	-	-	-	-	-	-	-
Hammermills (EU010, EU011, and EU067) (EP003)	CE003	-	-	-	-	-	-	-	-	-	-	-
DDGS Handling and Loadout (EU040 - EU043) (EP008)	CE008	-	-	-	-	-	-	-	-	-	-	-
DDGS Cooler (EU036) (EP014)	CE014	0.33	0.07	-	-	-	0.07	-	0.07	-	-	0.53
Corn Storage Bin (EU066)	N/A	-	-	-	-	-	-	-	-	-	-	-
Truck & Railcar Unloading Areas (EU070 & EU073) & Storage Bins (EU076 &	CE015	-	-	-	-	-	-	-	-	-	-	-
Fork Truck Unloading Area (EU075)	CE016	-	-	-	-	-	-	-	-	-	-	-
	CE022	-	-	-	-	-	-	-	-	-	-	-
Process Feed Area Surge Hoppers (EU078 & EU079)	CE017	-	-	-	-	-	-	-	-	-	-	-
Truck Unloading Area (EU080)	CE018	-	-	-	-	-	-	-	-	-	-	-
Fermentation Scrubber (EU016 through EU020) (EP005)	CE005	0.13	0.04	0.00	0.00	0.00	0.02	0.04	0.00	-	-	0.24
Fermentation Scrubber (EU016 through EU020) (EP010)	CE010	0.00	0.04	0.00	0.00	0.00	0.02	0.04	0.00	-	-	0.11
DDGS Dryers (EU035 and EU056) & TO/HSRG (EU014, EU015, EU021 through EU029, EU049 through EU055, EU058, EU059, EU068 and EU069) (EP007)	CE006 / CE007	-	-	negl.	-	-	0.03	0.71	-	-	negl.	0.75
		-	-	negl.	-	-	0.04	1.06	-	-	negl.	1.13
		0.61	0.39	0.90	0.90	3.94	0.44	0.31	0.00	-	-	3.55
Ethanol Loadout & Flare (EU045A and EU045B) (EP009)	CE009	-	-	0.06	-	-	negl.	1.29	-	-	0.12	1.41
Fire Pump (EU034) (EP006)	N/A	4.03E-04	4.86E-05	4.90E-04	-	-	6.20E-04	-	-	-	2.15E-04	2.08E-03
Biomethanator Flare (EU048) (EP013)	CE013	-	-	negl.	-	-	negl.	0.05	-	-	negl.	0.05
Space Heaters	N/A	-	-	negl.	-	-	negl.	0.02	-	-	negl.	0.02
Total Existing Emission Units	-	**1.08**	**0.55**	**0.96**	**0.90**	**3.94**	**0.61**	**3.52**	**0.07**	**0.00**	**0.12**	**7.77**
Proposed Modification												
Boiler #1 (EU081) (EP020) & Boiler #2 (EU082) (EP021)	N/A	-	-	negl.	-	-	0.03	0.74	-	-	negl.	0.78
Non-Fuel Grade Ethanol Loadout Skids & Flare (EU083 & EU084) (EP019)	CE019	-	-	negl.	-	-	negl.	0.14	-	-	0.01	0.15
Total Proposed Emission Units	**-**	**0.00**	**0.00**	**negl.**	**0.00**	**0.00**	**0.03**	**0.89**	**0.00**	**0.00**	**0.01**	**0.94**
Proposed Modification - Pneumatic Conveyance System												
Fork Truck Unloading Area (EU075)	CE016	-	-	-	-	-	-	-	-	-	-	-
	CE022	-	-	-	-	-	-	-	-	-	-	-
Total Proposed Emission Units	**-**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
SOURCE TOTAL (PSD Applicability)	**-**	**1.08**	**0.55**	**0.96**	**0.90**	**3.94**	**0.64**	**4.41**	**0.07**	**0.00**	**0.13**	**8.71**
Fugitive Emissions												
Uncaptured Emissions From Grain Receiving (F001)	N/A	-	-	-	-	-	-	-	-	-	-	-
Truck Traffic (F002)	N/A	-	-	-	-	-	-	-	-	-	-	-
Truck Traffic - EPCO Plant (F002)	N/A	-	-	-	-	-	-	-	-	-	-	-
Equipment Leaks (F003)	N/A	negl.	-	0.03	-	-	-	0.66	negl.	-	0.07	0.78
Cooling Tower (F004)	N/A	-	-	-	-	-	-	-	-	-	-	-
Cooling Tower - EPCO Plant (F004)	N/A	-	-	-	-	-	-	-	-	-	-	-
Corn Oil Storage (EU061 and EU062) (F005)	N/A	negl.	negl.	-	-	-	negl.	-	0.06	-	-	0.29
Storage Tanks (T001 - T010)	N/A	-	-	-	-	-	-	-	-	-	-	-
Total Existing Fugitives	**-**	**negl.**	**negl.**	**0.03**	**0.00**	**0.00**	**negl.**	**0.66**	**0.06**	**0.00**	**0.07**	**1.07**
Proposed Modification												
Equipment Leaks - NonFuel Grade Ethanol Distillation Process (F003)	N/A	2.64E-03	-	0.01	-	-	-	0.17	negl.	-	0.02	0.20
Cooling Tower - NonFuel Grade Ethanol Distillation Process (F004)	N/A	-	-	-	-	-	-	-	-	-	-	-
Storage Tanks (T013 - T017) (a)	N/A	-	-	1.95	1.95	1.95	-	-	-	1.95	1.95	3.85
Total Proposed Fugitives	**-**	**2.64E-03**	**0.00**	**1.96**	**1.95**	**1.95**	**0.00**	**0.17**	**0.00**	**1.95**	**1.97**	**4.05**
SOURCE TOTAL (FUGITIVES)	**-**	**2.64E-03**	**0.00**	**1.99**	**1.95**	**1.95**	**0.00**	**0.83**	**0.06**	**1.95**	**2.03**	**5.12**
SOURCE TOTAL (Part 70 Applicability)	**-**	**1.08**	**0.55**	**2.95**	**2.85**	**5.89**	**0.64**	**5.24**	**0.13**	**1.95**	**2.16**	**13.83**

Notes:
(a) The potential HAPs from the tanks will be limited to any one of these HAPs or a combination of these HAPs: benzene, chloroform, dimethyl phthalate, methyl idobutyl ketone, and toluene.
Non-HAP fugitive emissions are not counted toward the determination of Part 70, PSD, or Emission Offset applicability.
HAP fugitive emissions are counted only toward the determination of Part 70 applicability.

Appendix A: Emission Calculations
HAP Emissions Summary
Potential to Emit After Issuance of Permit (Limited PTE)

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

Process, Emission Units, Stack	Control Device	Limited Potential to Emit (tons/yr)										
		Acetaldehyde	Acrolein	Benzene	Chloroform	Dimethyl Phthalate	Formaldehyde	Hexane	Methanol	Methyl Isobutyl Ketone	Toluene	Total HAPs
Grain Receiving and Handling (EU001 - EU007, EU064) (EP001)	CE001	-	-	-	-	-	-	-	-	-	-	-
Hammermills (EU010, EU011, and EU067) (EP003)	CE003	-	-	-	-	-	-	-	-	-	-	-
DDGS Handling and Loadout (EU040 - EU043) (EP008)	CE008	-	-	-	-	-	-	-	-	-	-	-
DDGS Cooler (EU036) (EP014)	CE014	0.33	0.07	-	-	-	0.07	-	0.07	-	-	0.53
Corn Storage Bin (EU066)	N/A	-	-	-	-	-	-	-	-	-	-	-
Truck & Railcar Unloading Areas (EU070 & EU073) & Storage Bins (EU076 &	CE015	-	-	-	-	-	-	-	-	-	-	-
Fork Truck Unloading Area (EU075)	CE016	-	-	-	-	-	-	-	-	-	-	-
	CE022	-	-	-	-	-	-	-	-	-	-	-
Process Feed Area Surge Hoppers (EU078 & EU079)	CE017	-	-	-	-	-	-	-	-	-	-	-
Truck Unloading Area (EU080)	CE018	-	-	-	-	-	-	-	-	-	-	-
Fermentation Scrubber (EU016 through EU020) (EP005)	CE005	8.23	0.09	-	-	-	0.04	-	0.09	-	-	8.37
Fermentation Scrubber (EU016 through EU020) (EP010)	CE010	0.50	0.09	-	-	-	0.04	-	0.09	-	-	0.57
DDGS Dryers (EU035 and EU056) & TO/HSRG (EU014, EU015, EU021 through EU029, EU049 through EU055, EU058, EU059, EU068 and EU069) (EP007)*	CE006 / CE007	0.79	2.32	negl.	-	-	2.32	0.71	2.32	-	negl.	2.32
				negl.	-	-		1.06		-	negl.	
				-	-	-		-		-	-	
Ethanol Loadout & Flare (EU045A and EU045B) (EP009)	CE009	-	-	0.01	-	-	negl.	0.16	-	-	0.02	0.19
Fire Pump (EU034) (EP006)	N/A	4.03E-04	4.86E-05	4.90E-04	-	-	6.20E-04	-	-	-	2.15E-04	2.08E-03
Biomethanator Flare (EU048) (EP013)	CE013	**see note										
Space Heaters	N/A	-	-	negl.	-	-	negl.	0.02	-	-	negl.	0.02
Total Existing Emission Units	**-**	**9.85**	**2.56**	**0.01**	**0.00**	**0.00**	**2.46**	**1.96**	**2.56**	**0.00**	**0.02**	**11.99**
Proposed Modification												
Boiler #1 (EU081) (EP020) & Boiler #2 (EU082) (EP021)	N/A	-	-	negl.	-	-	0.03	0.74	-	-	negl.	0.78
Non-Fuel Grade Ethanol Loadout Skids & Flare (EU083 & EU084) (EP019)	CE019	-	-	negl.	-	-	negl.	0.09	-	-	negl.	0.09
Total Proposed Emission Units	**-**	**0.00**	**0.00**	**negl.**	**0.00**	**0.00**	**0.03**	**0.83**	**0.00**	**0.00**	**negl.**	**0.87**
Proposed Modification - Pneumatic Conveyance System												
Fork Truck Unloading Area (EU075)	CE016	-	-	-	-	-	-	-	-	-	-	-
	CE022	-	-	-	-	-	-	-	-	-	-	-
Total Proposed Emission Units	**-**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
SOURCE TOTAL (PSD Applicability)	**-**	**9.85**	**2.56**	**0.01**	**0.00**	**0.00**	**2.49**	**2.79**	**2.56**	**0.00**	**0.02**	**12.87**
Fugitive Emissions												
Uncaptured Emissions From Grain Receiving (F001)	N/A	-	-	-	-	-	-	-	-	-	-	-
Truck Traffic (F002)	N/A	-	-	-	-	-	-	-	-	-	-	-
Truck Traffic - EPCO Plant (F002)	N/A	-	-	-	-	-	-	-	-	-	-	-
Equipment Leaks (F003)	N/A	negl.	-	0.03	-	-	-	0.66	negl.	-	0.07	0.78
Cooling Tower (F004)	N/A	-	-	-	-	-	-	-	-	-	-	-
Cooling Tower - EPCO Plant (F004)	N/A	-	-	-	-	-	-	-	-	-	-	-
Corn Oil Storage (EU061 and EU062) (F005)	N/A	negl.	negl.	-	-	-	negl.	-	0.06	-	-	0.29
Storage Tanks (T001 - T010)	N/A	-	-	-	-	-	-	-	-	-	-	-
Total Existing Fugitives	**-**	**negl.**	**negl.**	**0.03**	**0.00**	**0.00**	**negl.**	**0.66**	**0.06**	**0.00**	**0.07**	**1.07**
Proposed Modification												
Equipment Leaks - NonFuel Grade Ethanol Distillation Process (F003)	N/A	2.64E-03	-	0.01	-	-	-	0.17	negl.	-	0.02	0.20
Cooling Tower - NonFuel Grade Ethanol Distillation Process (F004)	N/A	-	-	-	-	-	-	-	-	-	-	-
Storage Tanks (T013 - T017) (a)	N/A	-	-	1.95	1.95	1.95	-	-	-	1.95	1.95	3.85
Total Proposed Fugitives	**-**	**2.64E-03**	**0.00**	**1.96**	**1.95**	**1.95**	**0.00**	**0.17**	**negl.**	**1.95**	**1.97**	**4.05**
SOURCE TOTAL (FUGITIVES)	**-**	**2.64E-03**	**0.00**	**1.99**	**1.95**	**1.95**	**0.00**	**0.83**	**0.06**	**1.95**	**2.03**	**5.12**
SOURCE TOTAL (Part 70 Applicability)	**-**	**9.85**	**2.56**	**2.00**	**1.95**	**1.95**	**2.49**	**3.62**	**2.62**	**1.95**	**2.05**	**17.99**

Notes:

(a) The potential HAPs from the tanks will be limited to any one of these HAPs or a combination of these HAPs: benzene, chloroform, dimethyl phthalate, methyl idobutyl ketone, and toluene.

Non-HAP fugitive emissions are not counted toward the determination of Part 70, PSD, or Emission Offset applicability.

HAP fugitive emissions are counted only toward the determination of Part 70 applicability.

* The acrolein, formaldehyde, and methanol individual HAP limits are based on the total HAP limit of 2.32 tons per year.

** The biomethanator flare only operates when the DDGS dryers are down. The operation of the DDGS dryers is the worst case scenario for emissions, and the emissions from the DDGS dryers have been included in the total PTE.

Appendix A: Emission Calculations
Natural Gas HAPs Combustion Emissions Summary
Existing Emission Units

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

	Emission	TO / HRSG		Dryers (2 @ 45)		Loadout Flare (CE009)		Biomethanator Flare		Space Heaters		EPCO Heaters	
	Factor	135.0 MMBtu/hr		90.0 MMBtu/hr		10.0 MMBtu/hr		6 MMBtu/hr		2.5 MMBtu/hr		0.62 MMBtu/hr	
Pollutant	(lb/MMBtu)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)
2-Methylnaphthalene	2.40E-08	3.24E-06	1.42E-05	2.16E-06	9.46E-06	2.40E-07	1.05E-06	1.44E-07	6.31E-07	6.00E-08	2.63E-07	1.49E-08	6.52E-08
3-Methylchloranthrene	1.80E-09	2.43E-07	1.06E-06	1.62E-07	7.10E-07	1.80E-08	7.88E-08	1.08E-08	4.73E-08	4.50E-09	1.97E-08	1.12E-09	4.89E-09
7,12-Dimethylbenz(a)anthracene	1.60E-08	2.16E-06	9.46E-06	1.44E-06	6.31E-06	1.60E-07	7.01E-07	9.60E-08	4.20E-07	4.00E-08	1.75E-07	9.92E-09	4.34E-08
Acenaphthene	1.80E-09	2.43E-07	1.06E-06	1.62E-07	7.10E-07	1.80E-08	7.88E-08	1.08E-08	4.73E-08	4.50E-09	1.97E-08	1.12E-09	4.89E-09
Acenaphthlyene	1.80E-09	2.43E-07	1.06E-06	1.62E-07	7.10E-07	1.80E-08	7.88E-08	1.08E-08	4.73E-08	4.50E-09	1.97E-08	1.12E-09	4.89E-09
Anthracene	2.40E-09	3.24E-07	1.42E-06	2.16E-07	9.46E-07	2.40E-08	1.05E-07	1.44E-08	6.31E-08	6.00E-09	2.63E-08	1.49E-09	6.52E-09
Benz(a)anthracene	1.80E-09	2.43E-07	1.06E-06	1.62E-07	7.10E-07	1.80E-08	7.88E-08	1.08E-08	4.73E-08	4.50E-09	1.97E-08	1.12E-09	4.89E-09
Benzene	2.10E-06	2.84E-04	1.24E-03	1.89E-04	8.28E-04	2.10E-05	9.20E-05	1.26E-05	5.52E-05	5.25E-06	2.30E-05	1.30E-06	5.70E-06
Benzo(a)pyrene	1.20E-09	1.62E-07	7.10E-07	1.08E-07	4.73E-07	1.20E-08	5.26E-08	7.20E-09	3.15E-08	3.00E-09	1.31E-08	7.44E-10	3.26E-09
Benzo(b)fluoranthene	1.80E-09	2.43E-07	1.06E-06	1.62E-07	7.10E-07	1.80E-08	7.88E-08	1.08E-08	4.73E-08	4.50E-09	1.97E-08	1.12E-09	4.89E-09
Benzo(g,h,i)perylene	1.20E-09	1.62E-07	7.10E-07	1.08E-07	4.73E-07	1.20E-08	5.26E-08	7.20E-09	3.15E-08	3.00E-09	1.31E-08	7.44E-10	3.26E-09
Benzo(k)fluoranthene	1.80E-09	2.43E-07	1.06E-06	1.62E-07	7.10E-07	1.80E-08	7.88E-08	1.08E-08	4.73E-08	4.50E-09	1.97E-08	1.12E-09	4.89E-09
Chrysene	1.80E-09	2.43E-07	1.06E-06	1.62E-07	7.10E-07	1.80E-08	7.88E-08	1.08E-08	4.73E-08	4.50E-09	1.97E-08	1.12E-09	4.89E-09
Dibenzo(a,h)anthracene	1.20E-09	1.62E-07	7.10E-07	1.08E-07	4.73E-07	1.20E-08	5.26E-08	7.20E-09	3.15E-08	3.00E-09	1.31E-08	7.44E-10	3.26E-09
Dichlorobenzene	1.20E-06	1.62E-04	7.10E-04	1.08E-04	4.73E-04	1.20E-05	5.26E-05	7.20E-06	3.15E-05	3.00E-06	1.31E-05	7.44E-07	3.26E-06
Fluoranthene	3.00E-09	4.05E-07	1.77E-06	2.70E-07	1.18E-06	3.00E-08	1.31E-07	1.80E-08	7.88E-08	7.50E-09	3.29E-08	1.86E-09	8.15E-09
Fluorene	2.80E-09	3.78E-07	1.66E-06	2.52E-07	1.10E-06	2.80E-08	1.23E-07	1.68E-08	7.36E-08	7.00E-09	3.07E-08	1.74E-09	7.60E-09
Formaldehyde	7.50E-05	1.01E-02	4.43E-02	6.75E-03	2.96E-02	7.50E-04	3.29E-03	4.50E-04	1.97E-03	1.88E-04	8.21E-04	4.65E-05	2.04E-04
Hexane	1.80E-03	2.43E-01	1.06E+00	1.62E-01	7.10E-01	1.80E-02	7.88E-02	1.08E-02	4.73E-02	4.50E-03	1.97E-02	1.12E-03	4.89E-03
Indeno(1,2,3-cd)pyrene	1.80E-09	2.43E-07	1.06E-06	1.62E-07	7.10E-07	1.80E-08	7.88E-08	1.08E-08	4.73E-08	4.50E-09	1.97E-08	1.12E-09	4.89E-09
Napthalene	6.10E-07	8.24E-05	3.61E-04	5.49E-05	2.40E-04	6.10E-06	2.67E-05	3.66E-06	1.60E-05	1.53E-06	6.68E-06	3.78E-07	1.66E-06
Phenanathrene	1.70E-08	2.30E-06	1.01E-05	1.53E-06	6.70E-06	1.70E-07	7.45E-07	1.02E-07	4.47E-07	4.25E-08	1.86E-07	1.05E-08	4.62E-08
Pyrene	5.00E-09	6.75E-07	2.96E-06	4.50E-07	1.97E-06	5.00E-08	2.19E-07	3.00E-08	1.31E-07	1.25E-08	5.48E-08	3.10E-09	1.36E-08
Toluene	3.40E-06	4.59E-04	2.01E-03	3.06E-04	1.34E-03	3.40E-05	1.49E-04	2.04E-05	8.94E-05	8.50E-06	3.72E-05	2.11E-06	9.23E-06
Arsenic	2.40E-07	3.24E-05	1.42E-04	2.16E-05	9.46E-05	2.40E-06	1.05E-05	1.44E-06	6.31E-06	6.00E-07	2.63E-06	1.49E-07	6.52E-07
Cadmium	1.10E-06	1.49E-04	6.50E-04	9.90E-05	4.34E-04	1.10E-05	4.82E-05	6.60E-06	2.89E-05	2.75E-06	1.20E-05	6.82E-07	2.99E-06
Chromium	1.40E-06	1.89E-04	8.28E-04	1.26E-04	5.52E-04	1.40E-05	6.13E-05	8.40E-06	3.68E-05	3.50E-06	1.53E-05	8.68E-07	3.80E-06
Cobalt	8.40E-08	1.13E-05	4.97E-05	7.56E-06	3.31E-05	8.40E-07	3.68E-06	5.04E-07	2.21E-06	2.10E-07	9.20E-07	5.21E-08	2.28E-07
Manganese	3.80E-07	5.13E-05	2.25E-04	3.42E-05	1.50E-04	3.80E-06	1.66E-05	2.28E-06	9.99E-06	9.50E-07	4.16E-06	2.36E-07	1.03E-06
Mercury	2.60E-07	3.51E-05	1.54E-04	2.34E-05	1.02E-04	2.60E-06	1.14E-05	1.56E-06	6.83E-06	6.50E-07	2.85E-06	1.61E-07	7.06E-07
Nickel	2.10E-05	2.84E-03	1.24E-02	1.89E-03	8.28E-03	2.10E-04	9.20E-04	1.26E-04	5.52E-04	5.25E-05	2.30E-04	1.30E-05	5.70E-05
TOTAL		**0.26**	**1.13**	**0.17**	**0.75**	**0.02**	**0.08**	**0.01**	**0.05**	**0.005**	**0.02**	**0.001**	**0.01**

Total Combustion Emissions (tons/yr) **2.04**

Notes:
Emission factors are from AP-42, 5th Edition, Section 1.4, "Natural Gas Combustion," 7/98.

Methodology:
Emissions (lb/hr) = Heat Input Capacity (MMBtu/hr) * Emission Factor (lb/MMBtu)
Emissions (tons/yr) = Emissions (lb/hr) * 8760 hr/yr ÷ 2,000 lb/ton

Appendix A: Emission Calculations
Natural Gas HAPs Combustion Emissions Summary
Proposed Emission Units

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

Pollutant	Emission Factor (lb/MMBtu)	Boilers (2 @ 48.16) 96.32 MMBtu/hr (lb/hr)	(tons/yr)	Loadout Flare (CE019) 10.0 MMBtu/hr (lb/hr)	(tons/yr)
2-Methylnaphthalene	2.35E-08	2.27E-06	9.93E-06	2.35E-07	1.03E-06
3-Methylchloranthrene	1.76E-09	1.70E-07	7.44E-07	1.76E-08	7.73E-08
7,12-Dimethylbenz(a)anthracene	1.57E-08	1.51E-06	6.62E-06	1.57E-07	6.87E-07
Acenaphthene	1.76E-09	1.70E-07	7.44E-07	1.76E-08	7.73E-08
Acenaphthlyene	1.76E-09	1.70E-07	7.44E-07	1.76E-08	7.73E-08
Anthracene	2.35E-09	2.27E-07	9.93E-07	2.35E-08	1.03E-07
Benz(a)anthracene	1.76E-09	1.70E-07	7.44E-07	1.76E-08	7.73E-08
Benzene	2.06E-06	1.98E-04	8.69E-04	2.06E-05	9.02E-05
Benzo(a)pyrene	1.18E-09	1.13E-07	4.96E-07	1.18E-08	5.15E-08
Benzo(b)fluoranthene	1.76E-09	1.70E-07	7.44E-07	1.76E-08	7.73E-08
Benzo(g,h,i)perylene	1.18E-09	1.13E-07	4.96E-07	1.18E-08	5.15E-08
Benzo(k)fluoranthene	1.76E-09	1.70E-07	7.44E-07	1.76E-08	7.73E-08
Chrysene	1.76E-09	1.70E-07	7.44E-07	1.76E-08	7.73E-08
Dibenzo(a,h)anthracene	1.18E-09	1.13E-07	4.96E-07	1.18E-08	5.15E-08
Dichlorobenzene	1.18E-06	1.13E-04	4.96E-04	1.18E-05	5.15E-05
Fluoranthene	2.94E-09	2.83E-07	1.24E-06	2.94E-08	1.29E-07
Fluorene	2.75E-09	2.64E-07	1.16E-06	2.75E-08	1.20E-07
Formaldehyde	7.35E-05	7.08E-03	3.10E-02	7.35E-04	3.22E-03
Hexane	1.76E-03	1.70E-01	7.44E-01	1.76E-02	7.73E-02
Indeno(1,2,3-cd)pyrene	1.76E-09	1.70E-07	7.44E-07	1.76E-08	7.73E-08
Napthalene	5.98E-07	5.76E-05	2.52E-04	5.98E-06	2.62E-05
Phenanathrene	1.67E-08	1.61E-06	7.03E-06	1.67E-07	7.30E-07
Pyrene	4.90E-09	4.72E-07	2.07E-06	4.90E-08	2.15E-07
Toluene	3.33E-06	3.21E-04	1.41E-03	3.33E-05	1.46E-04
Arsenic	1.96E-07	1.89E-05	8.27E-05	1.96E-06	8.59E-06
Beryllium	1.18E-08	1.13E-06	4.96E-06	1.18E-07	5.15E-07
Cadmium	1.08E-06	1.04E-04	4.55E-04	1.08E-05	4.72E-05
Chromium	1.37E-06	1.32E-04	5.79E-04	1.37E-05	6.01E-05
Cobalt	8.24E-08	7.93E-06	3.47E-05	8.24E-07	3.61E-06
Manganese	3.73E-07	3.59E-05	1.57E-04	3.73E-06	1.63E-05
Mercury	2.55E-07	2.46E-05	1.08E-04	2.55E-06	1.12E-05
Nickel	2.06E-06	1.98E-04	8.69E-04	2.06E-05	9.02E-05
Selenium	2.35E-08	2.27E-06	9.93E-06	2.35E-07	1.03E-06
TOTAL		**0.18**	**0.78**	**0.02**	**0.08**

Total Combustion Emissions (tons/yr) **0.86**

Notes:
Emission factors are from AP-42, 5th Edition, Section 1.4, "Natural Gas Combustion," 7/98.

Methodology:
Emissions (lb/hr) = Heat Input Capacity (MMBtu/hr) * Emission Factor (lb/MMBtu)
Emissions (tons/yr) = Emissions (lb/hr) * 8760 hr/yr ÷ 2,000 lb/ton

Appendix A: Emission Calculations
Grain Receiving and Handling, Hammermilling, & DDGS Handling Operations

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

1. Potential to Emit $PM/PM_{10}/PM_{2.5}$ - Captured Emissions

Baghouse ID	Process Description	Outlet Grain Loading (gr/dscf)	Maximum Air Flow Rate (scfm)	PTE of PM/PM_{10} After Control (lb/hr)	PTE of PM/PM_{10} After Control (tons/yr)	PTE of $PM_{2.5}$ After Control (lb/hr)	PTE of $PM_{2.5}$ After Control (tons/yr)	Control Efficiency (%)	PTE of PM/PM_{10} Before Control (lb/hr)	PTE of PM/PM_{10} Before Control (tons/yr)	PTE of $PM_{2.5}$ Before Control (lb/hr)	PTE of $PM_{2.5}$ Before Control (tons/yr)	Limited PTE of $PM/PM_{10}/PM_{2.5}$ (lb/hr)	Limited PTE of $PM/PM_{10}/PM_{2.5}$ (tons/yr)
CE001	Grain Receiving and Handling (EU001 - EU007, EU064)	0.005	39,000	1.67	7.32	0.28	1.24	99%	167.14	732.09	28.41	124.45	1.67	7.31
CE003	Hammermills (EU010, EU011, EU067)	0.005	28,000	1.20	5.26	0.20	0.89	99%	120.00	525.60	20.40	89.35	1.20	5.26
CE008	DDGS Handling and Loadout (EU040 - EU043)	0.005	3,750	0.16	0.70	0.03	0.12	99%	16.07	70.39	2.73	11.97	0.16	0.70

Allowable Emissions:
The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates greater than 30 tons per hour:

Grain Receiving and Handling (EU001 - EU005, EU064):
P = 420 tons/hr
limit = 55.0 x (420 ^0.11) - 40 = 66.9 lb/hr PM

This unit is capable of complying with 326 IAC 6-3-2 WITH controls.

Grain Receiving and Handling (EU006, EU007):
Hammermills (EU010, EU011, EU067):
P = 140 tons/hr
limit = 55.0 x (140 ^0.11) - 40 = 54.7 lb/hr PM

This unit is capable of complying with 326 IAC 6-3-2 WITH controls.

DDGS Handling and Loadout (EU040 - EU043):
P = 101 tons/hr
limit = 55.0 x (101 ^0.11) - 40 = 51.4 lb/hr PM

This unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Notes:
Assume all PM emissions equal PM_{10} emissions.
Assume controlled $PM_{2.5}$ emissions equal 17% PM/PM_{10} emissions (AP-42 Table 9.9.1-1, Reference 40).
The limited PTE emission limits have been established in order to render 326 IAC 2-2 (PSD) not applicable.

Methodology:
PTE of PM/PM_{10} After Control (lb/hr) = Grain Loading (gr/dscf) * Max. Air Flow Rate (scfm) * 60 min/hr ÷ 7000 lb/gr
PTE of PM/PM_{10} After Control (tons/yr) = PTE of PM/PM_{10} After Control (lb/hr) * 8760 hr/yr ÷ 2000 lb/ton
PTE of $PM_{2.5}$ After Control (lb/hr) = PTE of PM/PM_{10} After Control (lb/hr) * 0.17
PTE of $PM_{2.5}$ After Control (tons/yr) = PTE of $PM_{2.5}$ After Control (lb/hr) * 8760 hr/yr ÷ 2000 lb/ton
PTE Before Control (lb/hr) = PTE After Control (lb/hr) ÷ (1 - Control Efficiency)
PTE Before Control (tons/yr) = PTE After Control (tons/yr) ÷ (1 - Control Efficiency)
Limited PTE of $PM/PM_{10}/PM_{2.5}$ (tons/yr) = Limited PTE of PM/PM_{10} (lb/hr) * 8760 hr/yr ÷ 2000 lb/ton

2. Potential to Emit $PM/PM_{10}/PM_{2.5}$ - Fugitive Emissions:

Unit ID	Unit Description	Annual Throughput Limit (tons/yr)	Uncontrolled PM Emission Factor (lb/ton)	Uncontrolled $PM_{10}/PM_{2.5}$ Emission Factor (lb/ton)	Baghouse ID	Capture Efficiency (%)	Fugitive PM Emissions (tons/yr)	Fugitive $PM_{10}/PM_{2.5}$ Emissions (tons/yr)
EU001	Grain Receiving	646,800	0.035	0.0078	CE001	80%	2.26	0.50

Notes:
Emission factors are from AP-42, Chapter 9.9.1-1 and AP-42, Chapter 9.9.1-2. Assume all the grain receiving and loadout is by hopper truck, which is the worst case scenario.
Assume all $PM_{2.5}$ emissions equal to PM_{10} emissions.

Methodology:
Fugitive Emissions (tons/yr) = Annual Throughput Limit (tons/yr) * Uncontrolled Emission Factor (lb/ton) * (1 - Capture Efficiency) ÷ 2000 lb/ton

Appendix A: Emission Calculations
DDGS Cooler

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

1. Potential to Emit PM/PM_{10}/$PM_{2.5}$

Baghouse ID	Process Description	Control Device	Outlet Grain Loading (gr/dscf)	Maximum Air Flow Rate (scfm)	PTE of PM/PM_{10} After Control (lb/hr)	PTE of PM/PM_{10} After Control (tons/yr)	PTE of $PM_{2.5}$ After Control (lb/hr)	PTE of $PM_{2.5}$ After Control (tons/yr)	Control Efficiency (%)	PTE of PM/PM_{10} Before Control (lb/hr)	PTE of PM/PM_{10} Before Control (tons/yr)	PTE of $PM_{2.5}$ Before Control (lb/hr)	PTE of $PM_{2.5}$ Before Control (tons/yr)	Limited PTE of PM/PM_{10}/$PM_{2.5}$ (lb/hr)	Limited PTE of PM/PM_{10}/$PM_{2.5}$ (tons/yr)
CE014	DDGS Cooler	Baghouse	0.002	30,299	0.52	2.28	0.09	0.39	99%	51.94	227.50	8.83	38.68	0.94	4.12

Allowable Emissions:
The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates greater than 30 tons per hour:

P = 34 tons/hr
limit = 55.0 x (34 ^0.11) - 40 = 41.1 lb/hr PM

This unit is capable of complying with 326 IAC 6-3-2 WITH controls.

Notes:
Assume all PM emissions equal PM_{10} emissions.
Assume controlled $PM_{2.5}$ emissions equal 17% PM/PM_{10} emissions (AP-42 Table 9.9.1-1, Reference 40).
The limited PTE emission limits have been established in order to render 326 IAC 2-2 (PSD) not applicable.

Methodology:
PTE of PM/PM_{10} After Control (lb/hr) = Grain Loading (gr/dscf) * Max. Air Flow Rate (scfm) * 60 min/hr ÷ 7000 lb/gr
PTE of PM/PM_{10} After Control (tons/yr) = PTE of PM/PM_{10} After Control (lb/hr) * 8760 hr/yr ÷ 2000 lb/ton
PTE of $PM_{2.5}$ After Control (lb/hr) = PTE of PM/PM_{10} After Control (lb/hr) * 0.17
PTE of $PM_{2.5}$ After Control (tons/yr) = PTE of $PM_{2.5}$ After Control (lb/hr) * 8760 hr/yr ÷ 2000 lb/ton
PTE of PM/PM_{10}/$PM_{2.5}$ Before Control (lb/hr) = PTE of PM/PM_{10} After Control (lb/hr) ÷ (1 - Control Efficiency)
PTE of PM/PM_{10}/$PM_{2.5}$ Before Control (tons/yr) = PTE of PM/PM_{10} After Control (tons/yr) ÷ (1 - Control Efficiency)
Limited PTE of PM/PM_{10}/$PM_{2.5}$ (tons/yr) = Limited PTE of PM/PM_{10} (lb/hr) * 8760 hr/yr ÷ 2000 lb/ton

2. Potential to Emit VOC:

Maximum DDGS Production: 297,840 tons/yr = 34 tons/hr
Limited DDGS Production: 210,000 tons/yr
VOC Emission Factor: 0.065 lbs/ton of DDGS (based on November 2007 stack testing)

Unlimited PTE of VOC (tons/yr) = 297,840 tons/yr * 0.065 lbs/ton ÷ 2000 lb/ton = 9.68 tons/yr
Limited PTE of VOC (tons/yr) = 210,000 tons/yr * 0.065 lbs/ton ÷ 2000 lb/ton = 6.83 tons/yr

3. Potential to Emit HAPs:

	Uncontrolled					Limited
	Acetaldehyde	Acrolein	Formaldehyde	Methanol	Total HAPs	Acetaldehyde
Emission Rate (lb/hr) *	7.50E-02	1.50E-02	1.50E-02	1.50E-02	0.12	7.50E-02
Potential to Emit (tons/yr)	0.33	0.07	0.07	0.07	0.53	0.33

* HAP emission rates were estimated by the source based on the stack testing results from a similar engineered site (Glacial Lakes Energy, MN) and scaled linearly based on production capacity

Methodology:
Potential to Emit (tons/yr) = Emission Rate (lb/hr) * 8760 hr/yr ÷ 2000 lb/ton

Appendix A: Emission Calculations
Corn Storage Bin EU066

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

Corn Storage Bin EU066 - No Control

Max Throughput	PM Emission Factor	PM_{10} Emission Factor	$PM_{2.5}$ Emission Factor	PM Emissions		PM_{10} Emisssions		$PM_{2.5}$ Emisssions	
(tons/hr)	(lb/ton)	(lb/ton)	(lb/ton)	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
420	0.035	0.0078	0.001326	14.70	64.39	3.28	14.35	0.56	2.44

Allowable Emissions:
The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates greater than 30 tons per hour:

P = 420 tons/hr
limit = 55.0 x (420 ^0.11) - 40 = 66.9 lb/hr PM

This unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Notes:
Emission factors are from AP-42, Chapter 9.9.1-1.
Assume $PM_{2.5}$ emissions equal 17% PM_{10} emissions (AP-42 Table 9.9.1-1, Reference 40).

Methodology:
PM Emissions (lb/hr) = Max Throughput (tons/hr) * PM Emission Factor (lbs/ton)
PM Emissions (tons/yr) = PM Emissions (lb/hr) * 8760 hr/yr ÷ 2000 lb/ton
PM_{10} Emissions (lb/hr) = Max Throughput (tons/hr) * PM_{10} Emission Factor (lbs/ton)
PM_{10} Emissions (tons/yr) = PM_{10} Emissions (lb/hr) * 8760 hr/yr ÷ 2000 lb/ton

Appendix A: Emission Calculations
Receiving and Transfer Operations

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

Potential to Emit $PM/PM_{10}/PM_{2.5}$ - Captured Emissions:

Process Description	Baghouse ID	Outlet Grain Loading (gr/dscf)**	Maximum Air Flow Rate (scfm)**	PTE of PM/PM_{10} After Control (lb/hr)	PTE of PM/PM_{10} After Control (tons/yr)	PTE of $PM_{2.5}$ After Control (lb/hr)	PTE of $PM_{2.5}$ After Control (tons/yr)	Control Efficiency (%)	PTE of $PM/PM_{10}/PM_{2.5}$ Before Control (lb/hr)	PTE of $PM/PM_{10}/PM_{2.5}$ Before Control (tons/yr)
Truck & Railcar Unloading Areas (EU070 & EU073) & Storage Bins (EU076 & EU077)	CE015	0.0000295	3,200	0.0008	0.0035	0.0001	0.0006	99.9%	0.81	3.54
Fork Truck Unloading Area (EU075)	CE016	0.0000295	2,500	0.0006	0.0028	0.0001	0.0005	99.9%	0.63	2.77
	CE022	0.0000295	22,500	0.0057	0.0249	0.0010	0.0042	99.9%	5.69	24.92
Process Feed Area Surge Hoppers (EU078 & EU079)	CE017	0.0000295	1,300	0.0003	0.0014	0.0001	0.0002	99.9%	0.33	1.44
Truck Unloading Area (EU080)	CE018	0.0000295	760	0.0002	0.0008	0.00003	0.0001	99.9%	0.19	0.84

** Specifications of the control devices provided by the source.

Allowable Emissions:
The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

P = 25 tons/hr
limit = 4.1 x (25 ^0.67) = 35.4 lb/hr PM

Each unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Notes:
The raw material handled and transferred has been requested by the source as confidential information.
Assume all PM emissions equal PM_{10} emissions.
Assume controlled $PM_{2.5}$ emissions equal 17% PM/PM_{10} emissions (AP-42 Table 9.9.1-1, Reference 40).

Methodology:
PTE of PM/PM_{10} After Control (lb/hr) = Grain Loading (gr/dscf) * Max. Air Flow Rate (scfm) * 60 min/hr ÷ 7000 lb/gr
PTE of PM/PM_{10} After Control (tons/yr) = PTE of PM/PM_{10} After Control (lb/hr) * 8760 hr/yr ÷ 2000 lb/ton
PTE of $PM_{2.5}$ After Control (lb/hr) = PTE of PM/PM_{10} After Control (lb/hr) * 0.17
PTE of $PM_{2.5}$ After Control (tons/yr) = PTE of $PM_{2.5}$ After Control (lb/hr) * 8760 hr/yr ÷ 2000 lb/ton
PTE of $PM/PM_{10}/PM_{2.5}$ Before Control (lb/hr) = PTE of PM/PM_{10} After Control (lb/hr) ÷ (1 - Control Efficiency)
PTE of $PM/PM_{10}/PM_{2.5}$ Before Control (tons/yr) = PTE of PM/PM_{10} After Control (tons/yr) ÷ (1 - Control Efficiency)

Appendix A: Emission Calculations
Fermentation Scrubber CE005
Emission Units EU016 through EU020

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

Scrubber VOC Control Efficiency = 99.60%
Scrubber HAP Control Efficiency = 50.00%

Controlled Emissions	lb/hr	tons/yr
VOC	1.31	5.74
Acetaldehyde	0.03	0.13
Acrolein	0.01	0.04
Formaldehyde	0.004	0.02
Methanol	0.01	0.04
Total HAPs (Controlled)	0.054	0.24

Uncontrolled Emissions	lb/hr	tons/yr
VOC	327.50	1,434.45
Acetaldehyde	0.06	0.26
Acrolein	0.02	0.09
Formaldehyde	0.008	0.04
Methanol	0.02	0.09
Total HAPs (Uncontrolled)	0.108	0.47

Limited Emissions	lb/hr	tons/yr
VOC	9.50	41.61
Acetaldehyde	1.88	8.23
Acrolein	0.02	0.09
Formaldehyde	0.008	0.04
Methanol	0.02	0.09
Total HAPs (Limited)	1.91	8.37

Notes:
Controlled VOC and acetaldehyde emission rates and VOC control efficiency are based on performance tests performed on April 8, 2009.
Controlled acrolein, methanol, and formaldehyde emission rates are based on performance tests at similar facilities.
The limited PTE emission limits for VOC, acetaldehyde, and total HAPs have been established in order to render 326 IAC 2-2 (PSD) not applicable.

Methodology:
Controlled Emissions (tons/yr) = Controlled Emissions (lb/hr) * 8760 hrs/yr÷ 2000 lb/ton
Uncontrolled Emissions (lb/hr) = Controlled Emissions (lb/hr)÷ (1 - Control Efficiency)
Uncontrolled Emissions (tons/yr) = Uncontrolled Emissions (lb/hr) * 8760 hrs/yr ÷ 2000 lb/ton
Limited Emissions (tons/yr) = Limited Emissions (lb/hr) * 8760 hrs/yr ÷ 2000 lb/ton

Appendix A: Emission Calculations
Fermentation Scrubber CE010
Emission Units EU016 through EU020

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

Scrubber VOC Control Efficiency = 99.96%
Scrubber HAP Control Efficiency = 50.00%

Controlled Emissions	lb/hr	tons/yr
VOC	0.009	0.04
Acetaldehyde	0.0002	0.001
Acrolein	0.01	0.04
Formaldehyde	0.004	0.02
Methanol	0.01	0.04
Total HAPs (Controlled)	0.024	0.11

Uncontrolled Emissions	lb/hr	tons/yr
VOC	22.50	98.55
Acetaldehyde	0.0004	0.002
Acrolein	0.02	0.09
Formaldehyde	0.008	0.04
Methanol	0.02	0.09
Total HAPs (Uncontrolled)	0.048	0.21

Limited Emissions	lb/hr	tons/yr
VOC	0.62	2.72
Acetaldehyde	0.114	0.50
Acrolein	0.02	0.09
Formaldehyde	0.008	0.04
Methanol	0.02	0.09
Total HAPs (Limited)	0.13	0.57

Notes:
Controlled VOC and acetaldehyde emission rates and VOC control efficiency are based on performance tests performed on April 8, 2009.
Controlled acrolein, methanol, and formaldehyde emission rates are based on performance tests at similar facilities.
The limited PTE emission limits for VOC, acetaldehyde, and total HAPs have been established in order to render 326 IAC 2-2 (PSD) not applicable.

Methodology:
Controlled Emissions (tons/yr) = Controlled Emissions (lb/hr) * 8760 hrs/yr÷ 2000 lb/ton
Uncontrolled Emissions (lb/hr) = Controlled Emissions (lb/hr)÷ (1 - Control Efficiency)
Uncontrolled Emissions (tons/yr) = Uncontrolled Emissions (lb/hr) * 8760 hrs/yr ÷ 2000 lb/ton
Limited Emissions (tons/yr) = Limited Emissions (lb/hr) * 8760 hrs/yr ÷ 2000 lb/ton

Appendix A: Emission Calculations
DDGS Dryers and TO/HRSG
Combustion Emissions

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

1. DDGS Dryers Combustion Emissions

Heat Input Capacity (MMBtu/hr)	HHV (MMBtu/MMCF)	Throughput (MMCF/yr)
90.0	1020	772.94

	PM*	PM_{10}*	direct $PM_{2.5}$*	SO_2	NO_x**	VOC	CO
Emission Factor (lb/MMCF)	1.9	7.6	7.6	0.6	81.7	5.5	84
Potential Emissions (tons/yr)	0.73	2.94	2.94	0.23	31.57	2.13	32.46

* PM emission factor is filterable PM only. PM_{10} emission factor is filterable and condensable PM_{10} combined.
$PM_{2.5}$ emission factor is filterable and condensable $PM_{2.5}$ combined.
** NO_x emission factor based on stack test results from a similar source. Central Indiana Ethanol, LLC will verify emission rate via stack test.

2. TO / HRSG Combustion Emissions

Heat Input Capacity (MMBtu/hr)	HHV (MMBtu/MMCF)	Throughput (MMCF/yr)
135.0	1020	1,159.41

	PM*	PM_{10}*	direct $PM_{2.5}$*	SO_2	NO_x**	VOC	CO
Emission Factor (lb/MMCF)	1.9	7.6	7.6	0.6	80	5.5	84
Potential Emissions (tons/yr)	1.10	4.41	4.41	0.35	46.38	3.19	48.70

* PM emission factor is filterable PM only. PM_{10} emission factor is filterable and condensable PM_{10} combined.
$PM_{2.5}$ emission factor is filterable and condensable $PM_{2.5}$ combined.
** NO_x emission factor based on stack test results from a similar source. Central Indiana Ethanol, LLC will verify emission rate via stack test.

Notes:
Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3 (AP-42, 3/98).
Assume $PM_{2.5}$ emissions equal to PM_{10} emissions.
HAP emissions are included on the HAPs Combutions Emissions Summary sheet.

Methodology:
Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) * 8760 hr/yr ÷ HHV (MMBtu/MMCF)
Potential Emissions (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lb/MMCF) ÷ 2000 lb/ton

3. Combined Combustion Emissions - GHGs

	Greenhouse Gas		
	CO_2	CH_4	N_2O
Emission Factor (lb/MMCF)	120,000	2.3	2.2
Potential Emissions (tons/yr)	115,941	2.22	2.13
Summed Potential Emissions (tons/yr)	115,946		
CO_2e Total (tons/yr)	116,647		

Notes:
The N_2O Emission Factor for uncontrolled is 2.2. The N_2O Emission Factor for low NO_x 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.
The Global Warming Potentials (GWP) are from Table A-1 of 40 CFR Part 98 Subpart A.

Methodology:
Potential Emissions (tons/yr) = Combined Throughput (MMCF/yr) * Emission Factor (lb/MMCF) ÷ 2000 lb/ton
CO_2e (tons/yr) = [CO_2 Potential Emissions (tons/yr) * CO_2 GWP (1)] + [CH_4 Potential Emissions (tons/yr) * CH_4 GWP (21)] + [N_2O Potential Emissions (tons/yr) * N_2O GWP (310)]

Appendix A: Emission Calculations
DDGS Dryers and TO/HRSG
Process Emissions

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

4. Process Emissions

Particulate Emissions

Control ID	Emissions Units	Outlet Grain Loading (gr/dscf)	Maximum Air Flow Rate (scfm)	PTE of $PM/PM_{10}/PM_{2.5}$ After Control (lb/hr)	PTE of $PM/PM_{10}/PM_{2.5}$ After Control (tons/yr)	Control Efficiency (%)	PTE of $PM/PM_{10}/PM_{2.5}$ Before Control (lb/hr)	PTE of $PM/PM_{10}/PM_{2.5}$ Before Control (tons/yr)
CE006 / CE007	EU035, EU056	0.0137	33,360	3.92	17.16	90%	39.17	171.58

Allowable Emissions:
The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates greater than 30 tons per hour:

P = 34 tons/hr
limit = 55.0 x (34 ^0.11) - 40 = 41.1 lb/hr PM

This unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Notes:
The $PM/PM_{10}/PM_{2.5}$ outlet grain loading is based on November 2007 stack test results.

Methodology:
PTE After Control (lb/hr) = Grain Loading (gr/dscf) * Max. Air Flow Rate (scfm) * 60 min/hr÷ 7000 lb/gr
PTE After Control (tons/yr) = PTE After Control (lb/hr) * 8760 hr/yr÷ 2000 lb/ton
PTE Before Control (lb/hr) = PTE After Control (lb/hr) ÷ (1 - Control Efficiency)
PTE Before Control (tons/yr) = PTE Before Control (lb/hr) * 8760 hr/yr÷ 2000 lb/ton

CO, VOC, HAP, and NO_x Emissions

Control ID	Pollutant	PTE After Control		Control Efficiency	PTE Before Control	
		lb/hr	tons/yr	(%)	lb/hr	tons/yr
CE007	CO	13.99	61.28	90.0%	139.90	612.76
	VOC	1.09	4.77	99.62%	286.84	1,256.37
	Acetaldehyde	0.14	0.61	90%	1.40	6.13
	Acrolein	0.09	0.39	90%	0.90	3.94
	Formaldehyde	0.10	0.44	90%	1.00	4.38
	Methanol	0.07	0.31	90%	0.70	3.07
	Total HAPs	0.81	3.55	90%	8.10	35.48
	NO_x	9.64	42.22	---	---	---

Notes:
The CO and NO_x emission rates after controls are based on November 2007 stack test results.
The VOC and HAP after control (lb/hr) emission rates for the RTO are based on emission rates observed during the November 2007 stack test results.

Methodology:
PTE After Control (tons/yr) = PTE After Control (lb/hr) * 8760 hr/yr÷ 2000 lb/ton
PTE Before Control (lb/hr) = PTE After Control (lb/hr) ÷ (1 - Control Efficiency)
PTE Before Control (tons/yr) = PTE Before Control (lb/hr) * 8760 hr/yr÷ 2000 lb/ton

SO_2 Emissions

Unlimited Ethanol Production - Railcar Loading (gal/min)	Emission Factor (lb/gal)	Unlimited Emission Rate (lb/hr)	Unlimited Emission Rate (tons/yr)	Controlled Emission Rate (lb/hr)	Controlled Emission Rate (tons/yr)	Limited Ethanol Production (gal/yr)	Emission Factor (lb/gal)	Limited Emission Rate (lb/hr)	Limited Emission Rate (tons/yr)
800	0.001	48.00	210.24	0.29	1.27	64,900,000	0.001	7.41	32.45

Notes:
SO_2 emission factor based on testing at similar plant.
SO_2 emission rate after controls is based on November 2007 stack test results.

Methodology:
Unlimited Emission Rate (lb/hr) = Unlimited Production (gal/min) * Emission Factor (lb/gal) * 60 min/hr
Limited Emission Rate (lb/hr) = Limited Production (gal/yr) * Emission Factor (lb/gal)÷ 8760 hr/yr
Emission Rate (tons/yr) = Emission Rate (lb/hr) * 8760 hr/yr÷ 2000 lb/ton

5. Combined Limited Emissions

Pollutant	Limited Emissions (lb/hr)	Limited Emissions (tons/yr)
$PM/PM_{10}/PM_{2.5}$	8.0	35.04
VOC	5.15	22.56
CO	21.0	91.98
SO_2	8.5	37.23
NO_x	19.7	86.29
Acetaldehyde	0.18	0.79
Total HAPs	0.53	2.32

Notes:
The limited PTE emission limits have been established in order to render 326 IAC 2-2 (PSD) not applicable.

Methodology:
Limited Emissions (tons/yr) = Limited Emissions (lb/hr) * 8760 hr/yr÷ 2000 lb/ton

Appendix A: Emission Calculations
Ethanol Loading Racks (EU045A and EU045B)
Uncontrolled Potential to Emit

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

1. Emission Factors: AP-42

Denatured and blended ethanol will be shipped by either truck loading rack EU045A or railcar loading rack EU045B. The railcars and trucks may each be used to carry gasoline prior to filling with ethanol. Both railcars and trucks will be filled by submerged loading process.
Truck loading rack (EU045A) and railcar loading rack (EU045B) will both be controlled by flare CE009 which has a control efficiency of 98% for VOC and HAPs.

According to AP-42, Chapter 5.2 - Transportation and Marketing of Petroleum Liquids (01/95), the VOC emission factors for the truck and rail loading racks can be estimated from the following equation:

$$L = 12.46 \times (SPM)/T$$

where:

L = loading loss (lbs/kgal)
S = a saturation factor (see AP-42, Table 5.2-1)
P = true vapor pressure of the liquid loaded (psia)
M = molecular weight of vapors
T = temperature of the bulk liquid loaded (degree R)

Previous Stored Liquid	*S	P (psia)	M (lb/mole lb)	T (degree R)	L (lb/kgal)
Gasoline (normal)	1.0	6.2	62	512.3	9.35
Gasoline (clean cargo)	0.5	6.2	62	512.3	4.67
Denatured Ethanol (normal)	0.6	0.50	49.7	512.3	0.36
Denatured Ethanol (clean cargo)	0.5	0.50	49.7	512.3	0.30
Blended Ethanol (normal)	0.6	1.54	57.4	512.3	1.29
Blended Ethanol (clean cargo)	0.5	1.54	57.4	512.3	1.07

Note: Blended ethanol based on E70 specifications from TANKS 4.09.

Therefore, the emission factor for loading denatured ethanol to the trucks and railcars which stored gasoline previously
= L (gasoline, normal) - L (gasoline, clean cargo) + L (denatured ethanol, clean cargo) = 4.98 lb/kgal

Therefore, the emission factor for loading blended ethanol to the trucks and railcars which stored gasoline previously
= L (gasoline, normal) - L (gasoline, clean cargo) + L (blended ethanol, clean cargo) = 5.75 lb/kgal

2. Potential to Emit VOC Before Control (assuming all blended ethanol loaded out):

Maximum Loading Rate for EU45A: 36 kgal/hr (for truck loading)
PTE of VOC Before Control (tons/yr) = 36 kgal/hr * 5.75 lbs/gal * 8760 hr/yr÷ 2000 lb/ton = 906.60 tons/yr

Maximum Loading Rate for EU45B: 48 kgal/hr (for railcar loading)
PTE of VOC Before Control (tons/yr) = 48 kgal/hr * 5.75 lbs/gal * 8760 hr/yr÷ 2000 lb/ton = 1,208.80 tons/yr

Worst case scenario is when loading all blended ethanol to railcars.	**Worst Case Uncontrolled VOC emissions =**	**1,208.80**	**tons/yr**
Worst case scenario when controlled by flare CE009 with an efficiency of 98%.	**Worst Case Controlled VOC emissions =**	**24.18**	**tons/yr**

Notes:
Blended ethanol has a VOC emission factor of 5.75 lbs/kgal, while denatured ethanol has a VOC emission factor of 4.98.
Therefore the emission factor for blended ethanol was used as a worst case scenario.

Methodology:
Worse Case Controlled VOC Emissions (tons/yr) = Worse Case Uncontrolled VOC Emissions (tons/yr)÷ (1 - Control Efficiency)

Appendix A: Emission Calculations
Ethanol Loading Racks (EU045A and EU045B)
Limited VOC Emissions
Potential to Emit HAPs

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

3. Limited VOC Emissions:

Annual Denatured and Blended Ethanol Production Limit:	64,900	kgal/yr	(for both railcar and truck loading)
Annual Denaturant Limit:	4,900	kgal/yr	(for both railcar and truck loading)
Maximum Amount of Blended Ethanol (based on denaturant limit and E70 blend):	16,333	kgal/yr	
Flare Control Efficiency:	98%		

Different scenarios to determine the worst case scenario:

(1) Assume all blended ethanol is loaded to trucks:
VOC (tons/yr) = 5.75 lbs/kgal * 16,333 kgal/yr * (1 - 98%)÷ 2000 lb/ton = 0.94 tons/yr

(2) Assume all blended ethanol is loaded to dedicated railcars:
VOC (tons/yr) = 1.07 lbs/kgal * 16,333 kgal/yr * (1 - 98%)÷ 2000 lb/ton = 0.18 tons/yr

(3) Assume all denatured ethanol is loaded to trucks:
VOC (tons/yr) = 4.98 lbs/kgal * 64,900 kgal/yr * (1 - 98%)÷ 2000 lb/ton = 3.23 tons/yr

(4) Assume all denatured ethanol is loaded to dedicated railcars:
VOC (tons/yr) = 0.30 lbs/kgal * 64,900 kgal/yr * (1 - 98%)÷ 2000 lb/ton = 0.20 tons/yr

Worst case scenario is when loading all denatured ethanol to trucks.
Truck and Railcar emissions are controlled by enclosed flare CE009. **Worst Case Limited VOC emissions = 3.23 tons/yr**

4. Potential to Emit HAPs:

HAP emissions are mainly from the unloading process for trucks and railcars which may have been used to ship gasoline previously.

HAP	HAP Fraction*	Unlimited PTE of HAP Before Control (tons/yr)	Unlimited PTE of HAP After Control (tons/yr)	Limited PTE of HAP After Control (tons/yr)
Benzene	2.50E-03	3.02	0.06	8.07E-03
Carbon Disulfide	2.00E-05	0.02	4.84E-04	6.46E-05
Cumene	1.00E-04	0.12	2.42E-03	3.23E-04
Ethyl benzene	5.00E-05	0.06	1.21E-03	1.61E-04
n-Hexane	5.00E-02	60.44	1.21	1.61E-01
Toluene	5.00E-03	6.04	0.12	1.61E-02
Xylene	5.00E-04	0.60	0.01	1.61E-03
TOTAL HAPs	---	70.32	1.41	0.19

* This is the HAP fraction for gasoline vapors.

Methodology:
Unlimited PTE of HAP Before Control (tons/yr) = Worse Case VOC Emissions (tons/yr) * HAP Fraction
Unlimited PTE of HAP After Control (tons/yr) = Unlimited PTE of HAP Before Control (tons/yr) * (1 - Control Efficiency)
Limited PTE of HAP After Control (tons/yr) = Worse Case Limited VOC Emissions (tons/yr) * HAP Fraction

Appendix A: Emission Calculations
Ethanol Loading Racks (EU045A and EU045B)
Potential to Emit (NO_x, CO)

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

5. Potential to Emit (NO_x and CO) from Flare Combustion (CE009)

Maximum Loadout Rate:	48.00	kgal/hr
Limited Loadout Rate:	64,900	kgal/yr

Pollutant	NO_x	CO
Emission Factor (lb/kgal)	0.077	0.129
Unlimited PTE (tons/yr)	16.19	27.12
Limited PTE (tons/yr)	2.50	4.19

Notes:
Particulate (PM, PM_{10}, and $PM_{2.5}$) and SO_2 emission factors are negligible due to the smokeless design and minimal H_2S levels.
Emission factors for NO_x and CO are based on the information provided by the flare manufacturer (MRW Technologies, Inc.)

Methodology:
Unlimited PTE (tons/yr) = Maximum Loadout Rate (kgal/hr) * Emission Factor (lb/kgal) * 8760 hr/yr ÷ 2000 lb/ton
Limited PTE (tons/yr) = Limited Loadout Rate (kgal/yr) * Emission Factor (lb/kgal) ÷ 2000 lb/ton

6. Potential to Emit (GHGs) from Flare Combustion (CE009)

Heat Input Capacity (MMBtu/hr)	HHV (MMBtu/MMCF)	Throughput (MMCF/yr)
10.0	1020	85.88

	Greenhouse Gas		
	CO_2	CH_4	N_2O
Emission Factor (lb/MMCF)	120,000	2.3	2.2
Potential Emissions (tons/yr)	5,153	0.10	0.09
Summed Potential Emissions (tons/yr)	5,153		
CO_2e Total (tons/yr)	5,184		

Notes:
The N_2O emission factor for uncontrolled is 2.2. The N_2O emission factor for low NO_x 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.
The Global Warming Potentials (GWP) are from Table A-1 of 40 CFR Part 98 Subpart A.

Methodology:
Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) * 8760 hr/yr ÷ HHV (MMBtu/MMCF)
Potential Emissions (tons/yr) = Maximum Heat Input Capacity (MMCF/yr) * Emission Factor (lb/MMCF) ÷ 2000 lb/ton
CO_2e (tons/yr) = [CO_2 Potential Emissions (tons/yr) * CO_2 GWP (1)] + [CH_4 Potential Emissions (tons/yr) * CH_4 GWP (21)] + [N_2O Potential Emissions (tons/yr) * N_2O GWP (310)]

Appendix A: Emission Calculations
Internal Combustion Engines
Diesel Fire Pump

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

A. Emission Factors

Emission factors from NSPS, Subpart IIII (Table 4) for model year 2008 and earlier between 225 and 450 KW (300 and 600 hp)

NO_x + NMHC	10.5 g/kwh =	7.8 g/hp-hr	
CO	3.5 g/kwh =	2.6 g/hp-hr	
PM	0.54 g/kwh =	0.4 g/hp-hr	

Emission factors from AP-42, Chapter 3.3, Gasoline and Diesel Industrial Engines, Table 3.3-1 (10-96)

SO_x	0.00205 lb/hp-hr	0.0005125 lb/hp-hr	LSD fuel assume 75% reduction in emissions
PM_{10}	0.00220 lb/hp-hr		
CO_2	1.15 lb/hp-hr		
TOC	0.0025141 lb/hp-hr		

The HAP emission factors are from AP-42, Chapter 3.3, Gasoline and Diesel Industrial Engines, Table 3.3-2 (10-96).

B. Limited Emissions

Rated Capacity (hp):	300
Limited Hours of Operation:	500

Pollutant	PM	$PM_{10}/PM_{2.5}$	SO_2	VOC	CO	NO_x	GHGs as CO_2e
Unlimited Emissions (tpy)	0.07	0.17	0.04	0.19	0.43	1.29	86.25
Limited Emissions (tpy)	0.07	0.17	0.04	0.19	0.43	1.29	86.25

C. HAP Emissions

Pollutant	Emission Factor (lb/hp-hr)	Unlimited/ Limited Emissions (tons/yr)
Acetaldehyde	5.37E-06	4.03E-04
Acrolein	6.48E-07	4.86E-05
Benzene	6.53E-06	4.90E-04
1,3-Butadiene	2.74E-07	2.05E-05
Formaldehyde	8.26E-06	6.20E-04
Naphthalene	5.94E-07	4.45E-05
Toluene	2.86E-06	2.15E-04
Xylenes	2.00E-06	1.50E-04
Total PAH HAPs	1.18E-06	8.82E-05
Total HAPs	2.77E-05	2.08E-03

Notes:
Since the fire pump is for emergency use only, the unlimited emissions have been calculated as operating 500 hours per year.
Assume all $PM_{2.5}$ emissions equal to PM_{10} emissions.
Reduction of 75% based upon average fuel sulfur content through year 2005 of 2000 ppm and required use of Low Sulfur Diesel (LSD) with a maximum sulfur content of 500 ppm. EPA 420-R-04-0007: Final Regulatory Analysis: Control of Emissions from Nonroad Diesel Engines, page 3-91.

Methodology:
Unlimited/Limited Emissions (tons/yr) = Capacity (hp) * Emission Factor (g/hp-hr) * Limited Operation (hr/yr)÷ 453.54 g/lb ÷ 2000 lb/ton
Unlimited/Limited Emissions (tons/yr) = Capacity (hp) * Emission Factor (lb/hp-hr) * Limited Operation (hr/yr)÷ 2000 lb/ton

Appendix A: Emission Calculations
Biomethanator Flare CE013

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

Max. Heat Input MMBtu/hr	HHV (MMBtu/MMCF)	Throughput (MMCF/yr)
6.00	1020	51.53

The methanator flare only operates when the DDGS dryers are down.

	PM	PM_{10}	$PM_{2.5}$	SO_2	VOC	CO	NO_x	HAP
Emission Factor (lb/MMBtu)	-	-	-	-	0.052	0.37	0.068	-
Potential Emissions (tons/yr)	negl.	negl.	negl.	negl.	1.37	9.72	1.79	see note

	Greenhouse Gas		
	CO_2	CH_4	N_2O
Emission Factor (lb/MMCF)	120,000	2.3	2.2
Potential Emissions (tons/yr)	3,092	0.06	0.06
Summed Potential Emissions (tons/yr)	3,092		
CO_2e Total (tons/yr)	3,111		

Notes:
The Permittee stated that particulate emissions from this flare are negligible due to the smokeless design.
The Permittee stated that SO_2 emissions are negligible due to negligible sulfur presence in the gas stream.
Emission factors for NO_x and CO are from AP-42, Chapter 13.5, Table 13.5-1 (01/95).
The emission factor for VOC is derived from the emission factor for THC (0.14 lb/MMBtu) in AP-42, Chapter 13.5, Table 13.5-1 (01/95).
Per Table 13.5-2, the composition of the flare includes 63% non-VOC pollutants (methane and ethane). VOC = 37% * 0.14 = 0.052
HAP emissions are included on the HAPs Combutions Emissions Summary sheet.
The N_2O emission factor for uncontrolled is 2.2. The N_2O emission factor for low NO_x 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.
The Global Warming Potentials (GWP) are from Table A-1 of 40 CFR Part 98 Subpart A.

Methodology:
Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) * 8760 hr/yr÷ HHV (MMBtu/MMCF)
Potential Emissions (tons/yr) = Max. Heat Input (MMBtu/hr) * Emission Factor (lb/MMBtu) * 8760 hr/yr÷ 2000 lb/ton
Potential Emissions-GHGs (tons/yr) = Maximum Heat Input Capacity (MMCF/yr) * Emission Factor (lb/MMCF)÷ 2000 lb/tc
CO_2e (tons/yr) = [CO_2 Potential Emissions (tons/yr) * CO_2 GWP (1)] + [CH_4 Potential Emissions (tons/yr) * CH_4 GWP (21)] + [N_2O Potential Emissions (tons/yr) * N_2O GWP (310)]

Appendix A: Emissions Calculations
Natural Gas Combustion Only (MMBtu/hr <100)
Space Heaters

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

Max. Heat Input MMBtu/hr	HHV (MMBtu/MMCF)	Throughput (MMCF/yr)
2.50	1020	21.47

	Pollutant						
	PM*	PM_{10}*	direct $PM_{2.5}$*	SO_2	NO_x	VOC	CO
Emission Factor (lb/MMCF)	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emissions (tons/yr)	0.02	0.08	0.08	0.01	1.07	0.06	0.90

* PM emission factor is filterable PM only. PM_{10} emission factor is filterable and condensable PM_{10} combined.
$PM_{2.5}$ emission factor is filterable and condensable $PM_{2.5}$ combined.
** Emission factors for NO_x: Uncontrolled = 100, Low NO_x Burner = 50, Low NO_x Burners/Flue gas recirculation = 32

Notes:
All emission factors are based on normal firing.
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.
HAP emissions are included on the HAPs Combutions Emissions Summary sheet.

Methodology:
Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) * 8760 hr/yr ÷ HHV (MMBtu/MMCF)
Potential Emissions (tons/yr) = Max. Heat Input (MMBtu/hr) * Emission Factor (lb/MMBtu) * 8760 hr/yr ÷ 2000 lb/ton

	Greenhouse Gas		
	CO_2	CH_4	N_2O
Emission Factor (lb/MMCF)	120,000	2.3	2.2
Potential Emissions (tons/yr)	1,288	0.02	0.02
Summed Potential Emissions (tons/yr)	1,288		
CO_2e Total (tons/yr)	1,296		

Notes:
The N_2O emission factor for uncontrolled is 2.2. The N_2O emission factor for low NO_x 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.
The Global Warming Potentials (GWP) are from Table A-1 of 40 CFR Part 98 Subpart A.

Methodology:
Potential Emissions-GHGs (tons/yr) = Maximum Heat Input Capacity (MMCF/yr) * Emission Factor (lb/MMCF) ÷ 2000 lb/ton
CO_2e (tons/yr) = [CO_2 Potential Emissions (tons/yr) * CO_2 GWP (1)] + [CH_4 Potential Emissions (tons/yr) * CH_4 GWP (21)] + [N_2O Potential Emissions (tons/yr) * N_2O GWP (310)]

Appendix A: Emissions Calculations
Natural Gas Combustion Only (MMBtu/hr <100)
Space Heaters (EPCO Plant)

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

Max. Heat Input MMBtu/hr	HHV (MMBtu/MMCF)	Throughput (MMCF/yr)	
0.63	1020	5.41	Three (3) heaters @ 210,000 Btu/hr each

	Pollutant						
	PM*	PM_{10}*	direct $PM_{2.5}$*	SO_2	NO_x	VOC	CO
Emission Factor (lb/MMCF)	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emissions (tons/yr)	0.01	0.02	0.02	0.002	0.27	0.01	0.23

* PM emission factor is filterable PM only. PM_{10} emission factor is filterable and condensable PM_{10} combined.
$PM_{2.5}$ emission factor is filterable and condensable $PM_{2.5}$ combined.
** Emission factors for NO_x: Uncontrolled = 100, Low NO_x Burner = 50, Low NO_x Burners/Flue gas recirculation = 32

Notes:
All emission factors are based on normal firing.
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.
HAP emissions are included on the HAPs Combutions Emissions Summary sheet.

Methodology:
Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) * 8760 hr/yr ÷ HHV (MMBtu/MMCF)
Potential Emissions (tons/yr) = Max. Heat Input (MMBtu/hr) * Emission Factor (lb/MMBtu) * 8760 hr/yr ÷ 2000 lb/ton

	Greenhouse Gas		
	CO_2	CH_4	N_2O
Emission Factor (lb/MMCF)	120,000	2.3	2.2
Potential Emissions (tons/yr)	325	0.01	0.01
Summed Potential Emissions (tons/yr)	325		
CO_2e Total (tons/yr)	327		

Notes:
The N_2O emission factor for uncontrolled is 2.2. The N_2O emission factor for low NO_x 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.
The Global Warming Potentials (GWP) are from Table A-1 of 40 CFR Part 98 Subpart A.

Methodology:
Potential Emissions-GHGs (tons/yr) = Maximum Heat Input Capacity (MMCF/yr) * Emission Factor (lb/MMCF) ÷ 2000 lb/ton
CO_2e (tons/yr) = [CO_2 Potential Emissions (tons/yr) * CO_2 GWP (1)] + [CH_4 Potential Emissions (tons/yr) * CH_4 GWP (21)] + [N_2O Potential Emissions (tons/yr) * N_2O GWP (310)]

Appendix A: Emissions Calculations
Natural Gas Combustion Only (MMBtu/hr <100)
Boilers EU081 & EU082

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

Max. Heat Input MMBtu/hr	HHV (MMBtu/MMCF)	Throughput (MMCF/yr)
96.32	1020	827.22

Each boiler has a capacity of 48.16 MMBtu/hr.

	Pollutant						
	PM*	PM_{10}*	direct $PM_{2.5}$*	SO_2	NO_x	VOC	CO
Emission Factor (lb/MMCF)	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emissions (tons/yr)	0.79	3.14	3.14	0.25	41.36	2.27	34.74

* PM emission factor is filterable PM only. PM_{10} emission factor is filterable and condensable PM_{10} combined.
$PM_{2.5}$ emission factor is filterable and condensable $PM_{2.5}$ combined.
** Emission factors for NO_x: Uncontrolled = 100, Low NO_x Burner = 50, Low NO_x Burners/Flue gas recirculation = 32

Notes:
All emission factors are based on normal firing.
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.
HAP emissions are included on the HAPs Combutions Emissions Summary sheet.

Methodology:
Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) * 8760 hr/yr ÷ HHV (MMBtu/MMCF)
Potential Emissions (tons/yr) = Max. Heat Input (MMBtu/hr) * Emission Factor (lb/MMBtu) * 8760 hr/yr ÷ 2000 lb/ton

	Greenhouse Gas		
	CO_2	CH_4	N_2O
Emission Factor (lb/MMCF)	120,000	2.3	2.2
Potential Emissions (tons/yr)	49,633	0.95	0.91
Summed Potential Emissions (tons/yr)	49,635		
CO_2e Total (tons/yr)	49,935		

Notes:
The N_2O emission factor for uncontrolled is 2.2. The N_2O emission factor for low NO_x 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.
The Global Warming Potentials (GWP) are from Table A-1 of 40 CFR Part 98 Subpart A.

Methodology:
Potential Emissions-GHGs (tons/yr) = Maximum Heat Input Capacity (MMCF/yr) * Emission Factor (lb/MMCF) ÷ 2000 lb/ton
CO_2e (tons/yr) = [CO_2 Potential Emissions (tons/yr) * CO_2 GWP (1)] + [CH_4 Potential Emissions (tons/yr) * CH_4 GWP (21)] + [N_2O Potential Emissions (tons/yr) * N_2O GWP (310)]

Appendix A: Emission Calculations
Non-Fuel Grade Ethanol Loading Skids (EU083 and EU084)
Uncontrolled Potential to Emit

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

1. Emission Factors: AP-42

Non-fuel grade ethanol will be shipped by either truck loading skid EU083 or railcar loading skid EU084.
Both railcars and trucks will be filled by submerged loading process.
Truck loading skid (EU083) and railcar loading skid (EU084) will both be controlled by flare CE019 which has a control efficiency of 98% for VOC and HAPs.

According to AP-42, Chapter 5.2 - Transportation and Marketing of Petroleum Liquids (01/95), the VOC emission factors for the truck and rail loading racks can be estimated from the following equation:

$$L = 12.46 \times (SPM)/T$$

where:

L = loading loss (lbs/kgal)
S = a saturation factor (see AP-42, Table 5.2-1)
P = true vapor pressure of the liquid loaded (psia)
M = molecular weight of vapors
T = temperature of the bulk liquid loaded (degree R)

Previous Stored Liquid	*S	P (psia)	M (lb/mole lb)	T (degree R)	L (lb/kgal)
Denatured Ethanol (normal)	0.6	0.50	49.7	512.3	0.36
Denatured Ethanol (clean cargo)	0.5	0.50	49.7	512.3	0.30

2. Potential to Emit VOC Uncontrolled/Unlimited (assuming all denatured ethanol loaded out):

Maximum Loading Rate for EU83: 24 kgal/hr (for truck loading)
PTE of VOC Before Control (tons/yr) = 24 kgal/hr * 0.36 lbs/gal * 8760 hr/yr÷ 2000 lb/ton = 38.12 tons/yr

Maximum Loading Rate for EU84: 40 kgal/hr (for railcar loading)
PTE of VOC Before Control (tons/yr) = 40 kgal/hr * 0.36 lbs/gal * 8760 hr/yr÷ 2000 lb/ton = 63.53 tons/yr

Worst case scenario is when loading all denatured ethanol to railcars.	**Worst Case Uncontrolled VOC emissions =**	**63.53**	**tons/yr**
Worst case scenario when controlled by flare CE019 with an efficiency of 98%.	**Worst Case Controlled VOC emissions =**	**1.27**	**tons/yr**

Notes:
Denatured ethanol from normal cargo has a VOC emission factor of 0.36 lbs/kgal, while denatured ethanol from clean cargo has a VOC emission factor of 0.30. Therefore the emission factor for denatured ethanol (normal) was used as a worst case scenario.

Methodology:
Worse Case Controlled VOC Emissions (tons/yr) = Worse Case Uncontrolled VOC Emissions (tons/yr)÷ (1 - Control Efficiency)

Appendix A: Emission Calculations
Non-Fuel Grade Ethanol Loading Skids (EU083 and EU084)
Limited VOC Emissions
Potential to Emit HAPs

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

3. VOC Potential Emissions (Uncontrolled):

Annual Non-Fuel Grade Ethanol Production Limit: 60,000 kgal/yr (for both railcar and truck loading)

Different scenarios to determine the worst case scenario:

(1) Assume all denatured ethanol (normal) is loaded to trucks:
VOC (tons/yr) = 0.36 lbs/kgal * 60,000 kgal/yr ÷ 2000 lb/ton = 10.88 tons/yr

(2) Assume all denatured ethanol (normal) is loaded to dedicated railcars:
VOC (tons/yr) = 0.30 lbs/kgal * 60,000 kgal/yr ÷ 2000 lb/ton = 9.07 tons/yr

Worst case scenario is when loading to trucks. **Worst Case Limited VOC emissions = 10.88 tons/yr**

4. VOC Potential Emissions (Controlled):

Annual Non-Fuel Grade Ethanol Production Limit: 60,000 kgal/yr (for both railcar and truck loading)
Flare Control Efficiency: 98%

Different scenarios to determine the worst case scenario:

(1) Assume all denatured ethanol (normal) is loaded to trucks:
VOC (tons/yr) = 0.36 lbs/kgal * 60,000 kgal/yr * (1 - 98%) ÷ 2000 lb/ton = 0.22 tons/yr

(2) Assume all denatured ethanol (normal) is loaded to dedicated railcars:
VOC (tons/yr) = 0.30 lbs/kgal * 60,000 kgal/yr * (1 - 98%) ÷ 2000 lb/ton = 0.18 tons/yr

Worst case scenario is when loading to trucks.
Truck and Railcar emissions are controlled by enclosed flare CE019. **Worst Case Limited VOC emissions = 0.22 tons/yr**

5. Potential to Emit HAPs:

HAP emissions are mainly from the unloading process for trucks and railcars which may have been used to ship gasoline previously.

HAP	HAP Fraction*	Unlimited PTE of HAP Before Control (tons/yr)	Unlimited PTE of HAP After Control (tons/yr)	Limited PTE of HAP After Control (tons/yr)
Benzene	2.50E-03	0.16	3.18E-03	5.44E-04
Carbon Disulfide	2.00E-05	0.001	2.54E-05	4.35E-06
Cumene	1.00E-04	0.01	1.27E-04	2.18E-05
Ethyl benzene	5.00E-05	0.003	6.35E-05	1.09E-05
n-Hexane	5.00E-02	3.18	6.35E-02	1.09E-02
Toluene	5.00E-03	0.32	6.35E-03	1.09E-03
Xylene	5.00E-04	0.03	6.35E-04	1.09E-04
TOTAL HAPs	---	3.70	0.07	0.01

* This is the HAP fraction for gasoline vapors.

Methodology:
Unlimited PTE of HAP Before Control (tons/yr) = Worse Case VOC Emissions (tons/yr) * HAP Fraction
Unlimited PTE of HAP After Control (tons/yr) = Unlimited PTE of HAP Before Control (tons/yr) * (1 - Control Efficiency)
Limited PTE of HAP After Control (tons/yr) = Worse Case Limited VOC Emissions (tons/yr) * HAP Fraction

Appendix A: Emission Calculations
Non-Fuel Grade Ethanol Loading Skids (EU083 and EU084)
Potential to Emit (NO_x, CO)

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

6. Potential to Emit (NO_x and CO) from Flare Combustion (CE019)

Maximum Loadout Rate:	40.00	kgal/hr
Limited Loadout Rate:	60,000	kgal/yr

Pollutant	NO_x	CO
Emission Factor (lb/kgal)	0.077	0.129
Unlimited PTE (tons/yr)	13.49	22.60
Limited PTE (tons/yr)	2.31	3.87

Notes:
Particulate (PM, PM_{10}, and $PM_{2.5}$) and SO_2 emission factors are negligible due to the smokeless design and minimal H_2S levels.
Emission factors for NO_x and CO are based on the information provided by the flare manufacturer (MRW Technologies, Inc.)

Methodology:
Unlimited PTE (tons/yr) = Maximum Loadout Rate (kgal/hr) * Emission Factor (lb/kgal) * 8760 hr/yr ÷ 2000 lb/ton
Limited PTE (tons/yr) = Limited Loadout Rate (kgal/yr) * Emission Factor (lb/kgal) ÷ 2000 lb/ton

7. Potential to Emit (GHGs) from Flare Combustion (CE019)

Heat Input Capacity (MMBtu/hr)	HHV (MMBtu/MMCF)	Throughput (MMCF/yr)
10.0	1020	85.88

	Greenhouse Gas		
	CO_2	CH_4	N_2O
Emission Factor (lb/MMCF)	120,000	2.3	2.2
Potential Emissions (tons/yr)	5,153	0.10	0.09
Summed Potential Emissions (tons/yr)	5,153		
CO_2e Total (tons/yr)	5,184		

Notes:
The N_2O emission factor for uncontrolled is 2.2. The N_2O emission factor for low NO_x 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.
The Global Warming Potentials (GWP) are from Table A-1 of 40 CFR Part 98 Subpart A.

Methodology:
Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) * 8760 hr/yr ÷ HHV (MMBtu/MMCF)
Potential Emissions (tons/yr) = Maximum Heat Input Capacity (MMCF/yr) * Emission Factor (lb/MMCF) ÷ 2000 lb/ton
CO_2e (tons/yr) = [CO_2 Potential Emissions (tons/yr) * CO_2 GWP (1)] + [CH_4 Potential Emissions (tons/yr) * CH_4 GWP (21)] + [N_2O Potential Emissions (tons/yr) * N_2O GWP (310)]

Appendix A: Emission Calculations
Fugitive Emissions From Roads

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

1. Paved Roads

$E = [k * (sL/2)^{0.91} * (W)^{1.02}][1-(P/4N)]$ AP-42, Section 13.2.1.3, Eqn. 2

Factor	Description		PM	PM_{10}	$PM_{2.5}$
k =	PM Particle size multiplier (lb/VMT)	Table 13.2.1-1	0.011	0.002	0.0005
sL =	Road surface silt loading (g/m^2)	Table 13.2.1-3	2.90	2.90	2.90
P =	Number of "wet" days in an averaging period		120	120	120
N =	Number of days in the averaging period		365	365	365
W =	Average vehicle weight (tons)		29	29	29
E =	Emission factor (lb/VMT, vehicle miles traveled)		0.44	0.09	0.02

Emissions from Paved Roads

Activity	No. of Trucks (trucks/yr)	Miles Traveled per Truck (miles/truck)	Annual Mileage (VMT/yr)	Uncontrolled PM Emissions (tpy)	Controlled PM Emissons* (tpy)	Uncontrolled PM_{10} Emissions (tpy)	Controlled PM_{10} Emissions* (tpy)	Uncontrolled $PM_{2.5}$ Emissions (tpy)	Controlled $PM_{2.5}$ Emissions* (tpy)
Grain Receiving	25,872	0.84	21,732	4.77	2.39	0.95	0.48	0.23	0.12
DDGS Loadout	8,400	0.84	7,056	1.55	0.77	0.31	0.15	0.08	0.04
Ethanol Loadout	8,112	0.84	6,814	1.50	0.75	0.30	0.15	0.07	0.04
Denaturant Delivery	375	0.84	315	0.07	0.03	0.01	0.01	0.00	0.002
TOTAL				7.89	3.94	1.58	0.79	0.39	0.19

* Periodic sweeping will be done to provide control (50%) to $PM/PM_{10}/PM_{2.5}$ emissions.

2. Unpaved Roads

$E = k * (s/12)^{a} * (W/3)^{b} * [(365-P)/365]$ AP-42, Section 13.2.2.2, Eqns. 1a and 2

Factor	Description	PM	PM_{10}	$PM_{2.5}$
k =	Particle size multiplier (dimensionless)	4.9	1.5	0.15
s =	surface material silt content (%) (Table 13.2.2-1)	8.5	8.5	8.5
W =	mean vehicle weight (tons)	5.0	5.0	5.0
a =	Equation constants (Table 13.2.2-2)	0.7	0.9	0.9
b =	Equation constants (Table 13.2.2-2)	0.45	0.45	0.45
P =	Number of days with at least 0.01 in of precipitation	120	120	120
E =	Emission Factor (lb/VMT)	3.25	0.93	0.09

Total length of unpaved maintenance roads = 0.20 miles

Emission Area	No. of Trucks (trucks/yr)	Miles Traveled per Truck (miles/truck)	Annual Mileage (VMT/yr)	Uncontrolled PM Emissions (tpy)	Controlled PM Emissions (tpy)	Uncontrolled PM_{10} Emissions (tpy)	Controlled PM_{10} Emissions (tpy)	Uncontrolled $PM_{2.5}$ Emissions (tpy)	Controlled $PM_{2.5}$ Emissions (tpy)
Maintenance Roads	730	0.40	292	0.47	0.24	0.14	0.07	0.01	0.01

Methodology:
Annual Mileage (VMT/yr) = No. of Trucks (trucks/yr) * Miles Traveled (miles/truck)
Uncontrolled Emissions (tons/yr) = Annual Mileage (VMT/yr) * Emission Factor (lb/VMT) ÷ 2000 lb/ton

Appendix A: Emission Calculations
Fugitive Emissions From Roads
EPCO Plant

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

1. Paved Roads

$E= [k * (sL/2)^{0.91} * (W)^{1.02}][1-(P/4N)]$ AP-42, Section 13.2.1.3, Eqn. 2

Factor	Description		PM	PM_{10}	$PM_{2.5}$
k =	PM Particle size multiplier (lb/VMT)	Table 13.2.1-1	0.011	0.002	0.0005
sL =	Road surface silt loading (g/m^2)	Table 13.2.1-3	2.90	2.90	2.90
P =	Number of "wet" days in an averaging period		120	120	120
N =	Number of days in the averaging period		365	365	365
W =	Average vehicle weight (tons)		29	29	29
E =	Emission factor (lb/VMT, vehicle miles traveled)		0.44	0.09	0.02

Emissions from Paved Roads

Activity	No. of Trucks (trucks/yr)	Miles Traveled per Truck (miles/truck)	Annual Mileage (VMT/yr)	Uncontrolled PM Emissions (tpy)	Controlled PM Emissons* (tpy)	Uncontrolled PM_{10} Emissions (tpy)	Controlled PM_{10} Emissions* (tpy)	Uncontrolled $PM_{2.5}$ Emissions (tpy)	Controlled $PM_{2.5}$ Emissions* (tpy)
EPCO Trucks**	5,475	0.84	4,599	1.01	0.50	0.20	0.10	0.05	0.02
TOTAL				1.01	0.50	0.20	0.10	0.05	0.02

* Periodic sweeping will be done to provide control (50%) to $PM/PM_{10}/PM_{2.5}$ emissions.

** Based on 15 trucks per day

Methodology:
Annual Mileage (VMT/yr) = No. of Trucks (trucks/yr) * Miles Traveled (miles/truck)
Uncontrolled Emissions (tons/yr) = Annual Mileage (VMT/yr) * Emission Factor (lb/VMT) ÷ 2000 lb/ton

Appendix A: Emission Calculations
Equipment Leaks

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

1. Fugitive VOC Emissions

Process Stream	Equipment Component Source	Product	Component Count	Emission Factor (lb/hr per component)	Uncontrolled Rate (lb/hr)	Uncontrolled Rate (tons/yr)	Subpart VV Control	Controlled Rate (lb/hr)	TOC Weight (%)	Emitted Water (lb/hr)	Controlled TOC (lb/hr)	Controlled TOC (tons/yr)
F006	Valves	Gas/Vapor	74	0.01316	0.97	4.27	87.00%	0.13	100.00%	0.00	0.13	0.55
	Valves	Light Liquid	346	0.00889	3.07	13.47	84.00%	0.49	100.00%	0.00	0.49	2.15
	Pump Seals	Light Liquid	21	0.04388	0.92	4.04	69.00%	0.29	100.00%	0.00	0.29	1.25
	Compressors	Gas/Vapor	0	0.50274	0.00	0.00		0.00	100.00%	0.00	0.00	0.00
	Relief Valves	Gas/Vapor	15	0.22932	3.44	15.07	87.00%	0.45	100.00%	0.00	0.45	1.96
	Sampling Connections	All	14	0.03308	0.46	2.03	0.00%	0.46	100.00%	0.00	0.46	2.03
	Open Ended Lines	All	0	0.00375	0.00	0.00		0.00	100.00%	0.00	0.00	0.00
	Flanges	All	297	0.00404	1.20	5.25	0.00%	1.20	100.00%	0.00	1.20	5.25
	TOTAL				10.07	44.11		3.01		0.00	3.01	13.20

Notes:
Component count provided by source.
Emission factors are from Protocol for Equipment Leak Emission Estimates, EPA-453/R-95-017. Table 2-1 and Table 5-2
1 kg = 2.205 pounds

Methodology:
Uncontrolled Rate (lb/hr) = Emission Factor (lb/hr per component) * Component Count
Uncontrolled Rate (tons/yr) = Uncontrolled Rate (lb/hr) * 8760 hr/yr÷ 2000 lb/ton
Controlled Rate (lb/hr) = Uncontrolled Rate (lb/hr) ÷ (1 - Subpart VV Control)
Emitted Water (lb/hr) = Controlled Rate (lb/hr) ÷ (1 - TOC Weight)
Controlled TOC (lb/hr) = Controlled Rate (lb/hr) * TOC Weight
Controlled TOC (tons/yr) = Controlled TOC (lb/hr) * 8760 hr/yr÷ 2000 lb/ton

2. Fugitive HAP Emissions

HAP	HAP Fraction	Uncontrolled Emissions (tons/yr)	Controlled Emissions (tons/yr)
Acetaldehyde	2.00E-04	8.82E-03	2.64E-03
Benzene	2.50E-03	1.10E-01	3.30E-02
Carbon Disulfide	2.00E-05	8.82E-04	2.64E-04
Cumene	1.00E-03	4.41E-02	1.32E-02
Ethylbenzene	5.00E-05	2.21E-03	6.60E-04
n-Hexane	5.00E-02	2.21E+00	6.60E-01
Methanol	2.00E-04	8.82E-03	2.64E-03
Toluene	5.00E-03	2.21E-01	6.60E-02
Xylenes	5.00E-04	2.21E-02	6.60E-03
Total HAPs		2.62	0.78

Methodology:
Uncontrolled HAP Emissions (tons/yr) = Uncontrolled TOC (tons/yr) * HAP Fraction
Controlled HAP Emissions (tons/yr) = Controlled TOC (tons/yr) * HAP Fraction

Appendix A: Emission Calculations
Cooling Tower

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

1. Process Description

Type of Cooling Tower:	Induced Draft	
Circulation Flow Rate:	33,000	gal/min
Total Drift:	0.005%	of the circulating flow
Total Dissolved Solids:	2,500	ppm
Density:	8.345	lbs/gal

Note: The information above was provided by the cooling tower manufacturer for the same units located at a similar source.

2. Potential to Emit

Assume all the dissolved solids become PM_{10} emissions.

Assume all PM and $PM_{2.5}$ emissions equal PM_{10} emissions.

PTE of $PM/PM_{10}/PM_{2.5}$ (lb/hr) = 33,000 gal/min * 60 min/hr * 0.005% * 8.345 lbs/gal * 2,500 ppm * 1/1,000,000 ppm = 2.07 lbs/hr

PTE of $PM/PM_{10}/PM_{2.5}$ (tons/yr) = PTE of $PM/PM_{10}/PM_{2.5}$ (lb/hr) * 8760 hr/yr ÷ 2000 lb/ton = 9.05 tons/yr

Appendix A: Emission Calculations
Cooling Tower
EPCO Plant

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

1. Process Description

Type of Cooling Tower:	Induced Draft	
Circulation Flow Rate:	900	gal/min
Total Drift:	0.005%	of the circulating flow
Total Dissolved Solids:	2,500	ppm
Density:	8.345	lbs/gal

Note: The information above was provided by the cooling tower manufacturer for the same units located at a similar source.

2. Potential to Emit

Assume all the dissolved solids become PM_{10} emissions.

Assume all PM and $PM_{2.5}$ emissions equal PM_{10} emissions.

PTE of PM/PM_{10}/$PM_{2.5}$ (lb/hr) = 33,000 gal/min * 60 min/hr * 0.005% * 8.345 lbs/gal * 2,500 ppm * 1/1,000,000 ppm =	0.06	lbs/hr
PTE of PM/PM_{10}/$PM_{2.5}$ (tons/yr) = PTE of PM/PM_{10}/$PM_{2.5}$ (lb/hr) * 8760 hr/yr ÷ 2000 lb/ton =	0.25	tons/yr

Appendix A: Emission Calculations
Corn Oil Separation Unit and Storage Tank (EU061 and EU062)

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

Potential to Emit (PTE) for Corn Oil Separation Unit (EU061):

The thin stillage will be processed through a separation process to collect and store excess corn oil. The separation process will be enclosed resulting in no emissions. Loadout and Truck Traffic emissions are negligible based on low annual throughput.

Potential to Emit (PTE) for Storage Tank (EU062):

These values were provided by the source based on analytical testing.

Pollutant	PTE (lb/hr)	PTE (tons/yr)	HAP?	VOC?
Acetaldehyde	0.0002	8.76E-04	Y	Y
Acetic Acid	0.0390	0.17	N	Y
Acrolein	0.0001	4.38E-04	Y	Y
Ethanol	0.0430	0.19	Y	Y
Ethylacetate**	0.0140	0.06	N	Y
Formaldehyde	0.0002	8.76E-04	Y	Y
Formic Acid	0.0030	0.01	N	Y
2-furaldehyde	0.0001	4.38E-04	N	Y
Lactic Acid	0.0090	0.04	N	Y
Methanol**	0.0140	0.06	Y	Y
Phosphorous**	0.0080	0.04	Y	N
Total VOC	**0.123**	**0.54**		
Total HAP	**0.066**	**0.29**		

** Concentration was reported as less than the detection limit; therefore, the value is half the detection limit.

Appendix A: Emission Calculations
Storage Tanks

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

Emissions were calculated using Tanks 4.0.9d software and submitted by the source.

Appendix A: Emission Calculations
Proposed Storage Tanks

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

Emissions were calculated using Tanks 4.0.9d software and submitted by the source.
Proposed tanks worst-case HAP emissions is based on highest HAP for each liquid being considered for storge by tan
which shall be limited to any single HAP or a combination of these HAPs: benzene, chloroform, dimethyl phthalate, methyl isobutyl ketone, and toluene.
The total worst-case single HAP from the proposed tanks is 1.95 tons per year.
The worst-case single HAP is not acetaldehyde.
The worst-case HAP emission is conservatively assumed to be the same as the potential VOC emissions.
The throughput of the proposed tanks is based on an annual capacity of 60 million gallons of non-fuel grade ethanol.

Appendix A: Emission Calculations
Proposed Equipment Leaks

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

1. Fugitive VOC Emissions

Process Stream	Equipment Component Source	Product	Component Count	Emission Factor (lb/hr per component)	Uncontrolled Rate (lb/hr)	Uncontrolled Rate (tons/yr)	Subpart VV Control	Controlled Rate (lb/hr)	TOC Weight (%)	Emitted Water (lb/hr)	Controlled TOC (lb/hr)	Controlled TOC (tons/yr)
F006	Valves	Gas/Vapor	19	0.01316	0.25	1.10	87.00%	0.03	100.00%	0.00	0.03	0.14
	Valves	Light Liquid	87	0.00889	0.77	3.39	84.00%	0.12	100.00%	0.00	0.12	0.54
	Pump Seals	Light Liquid	5	0.04388	0.22	0.96	69.00%	0.07	100.00%	0.00	0.07	0.30
	Compressors	Gas/Vapor	0	0.50274	0.00	0.00		0.00	100.00%	0.00	0.00	0.00
	Relief Valves	Gas/Vapor	4	0.22932	0.92	4.02	87.00%	0.12	100.00%	0.00	0.12	0.52
	Sampling Connections	All	4	0.03308	0.13	0.58	0.00%	0.13	100.00%	0.00	0.13	0.58
	Open Ended Lines	All	0	0.00375	0.00	0.00		0.00	100.00%	0.00	0.00	0.00
	Flanges	All	74	0.00404	0.30	1.31	0.00%	0.30	100.00%	0.00	0.30	1.31
	TOTAL				2.59	11.35		0.77		0.00	0.77	3.39

Notes:
Component count provided by source.
Emission factors are from Protocol for Equipment Leak Emission Estimates, EPA-453/R-95-017. Table 2-1 and Table 5-2
1 kg = 2.205 pounds

Methodology:
Uncontrolled Rate (lb/hr) = Emission Factor (lb/hr per component) * Component Count
Uncontrolled Rate (tons/yr) = Uncontrolled Rate (lb/hr) * 8760 hr/yr ÷ 2000 lb/ton
Controlled Rate (lb/hr) = Uncontrolled Rate (lb/hr) ÷ (1 - Subpart VV Control)
Emitted Water (lb/hr) = Controlled Rate (lb/hr) ÷ (1 - TOC Weight)
Controlled TOC (lb/hr) = Controlled Rate (lb/hr) * TOC Weight
Controlled TOC (tons/yr) = Controlled TOC (lb/hr) * 8760 hr/yr ÷ 2000 lb/ton

2. Fugitive HAP Emissions

HAP	HAP Fraction	Uncontrolled Emissions (tons/yr)	Controlled Emissions (tons/yr)
Acetaldehyde	2.00E-04	2.27E-03	6.78E-04
Benzene	2.50E-03	2.84E-02	8.48E-03
Carbon Disulfide	2.00E-05	2.27E-04	6.78E-05
Cumene	1.00E-03	1.13E-02	3.39E-03
Ethylbenzene	5.00E-05	5.67E-04	1.70E-04
n-Hexane	5.00E-02	5.67E-01	1.70E-01
Methanol	2.00E-04	2.27E-03	6.78E-04
Toluene	5.00E-03	5.67E-02	1.70E-02
Xylenes	5.00E-04	5.67E-03	1.70E-03
Total HAPs		0.67	0.20

Methodology:
Fugitive HAP Emissions (tons/yr) = Controlled TOC (tons/yr) * HAP Fraction

Appendix A: Emission Calculations
Proposed Cooling Tower

Company Name: Central Indiana Ethanol, LLC
Address: 2955 West Delphi Pike, Marion, IN 46952
Title V Operating Permit No.: T053-32070-00062
Reviewer: John Haney/Julie Alexander
Date: February 25, 2013

1. Process Description

Type of Cooling Tower:	Induced Draft	
Circulation Flow Rate:	21,000	gal/min
Total Drift:	0.005%	of the circulating flow
Total Dissolved Solids:	2,500	ppm
Density:	8.345	lbs/gal

Note: The information above was provided by the cooling tower manufacturer for the same units located at a similar source.

2. Potential to Emit

Assume all the dissolved solids become PM_{10} emissions.

Assume all PM and $PM_{2.5}$ emissions equal PM_{10} emissions.

PTE of $PM/PM_{10}/PM_{2.5}$ (lb/hr) = 33,000 gal/min * 60 min/hr * 0.005% * 8.345 lbs/gal * 2,500 ppm * 1/1,000,000 ppm = 1.31 lbs/hr

PTE of $PM/PM_{10}/PM_{2.5}$ (tons/yr) = PTE of $PM/PM_{10}/PM_{2.5}$ (lb/hr) * 8760 hr/yr ÷ 2000 lb/ton = 5.76 tons/yr

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Governor

Thomas W. Easterly
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Norm Currey
Central Indiana Ethanol, LLC
2955 West Delphi Pike
Marion, IN 46952

DATE: August 19, 2013

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Part 70 Operating Permit
053-32070-00062

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:
Ryan Drook, President/CEO
Ann Curnow, Natural Resource Group LLC
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.

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

August 19, 2013

TO: Marion Public Library

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Central Indiana Ethanol, LLC
Permit Number: 053-32070-00062

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

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

TO: Interested Parties / Applicant

DATE: August 19, 2013

RE: Central Indiana Ethanol, LLC / 053-32070-00062

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

In order to conserve paper and reduce postage costs, IDEM's Office of Air Quality is now sending many permit decisions on CDs in Adobe PDF format. The enclosed CD contains information regarding the company named above.

This permit is also available on the IDEM website at:
http://www.in.gov/ai/appfiles/idem-caats/

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

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

Please Note: *If you feel you have received this information in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV.*

Enclosures
CD Memo.dot 6/13/2013

Mail Code 61-53

IDEM Staff	VHAUN 8/19/2013 Central Indiana Ethanol, LLC 053-32070-00062 FINAL			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

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1		Norm Currey Central Indiana Ethanol, LLC 2955 W Delphi Pike Marion IN 46952 (Source CAATS) Confirmed Delivery									
2		Ryan Drook President/CEO Central Indiana Ethanol, LLC 2955 W Delphi Pike Marion IN 46952 *(RO CAATS)*									
3		Marion City Council and Mayors Office 301 S. Branson Street Marion IN 46952-4052 *(Local Official)*									
4		Grant County Commissioners 401 South Adams Marion IN 46953 *(Local Official)*									
5		Ms. Mary Shipley 10968 E 100 S Marion IN 46953 *(Affected Party)*									
6		Grant County Health Department 401 S. Adams St, Courthouse Complex Marion IN 46953-2031 *(Health Department)*									
7		Mr. Thomas Lee Clevenger 4005 South Franks Lane Selma IN 47383 *(Affected Party)*									
8		Marion Public Library 600 S Washington St Marion IN 46953 *(Library)*									
9		Mr. Colin O'Brien Natural Resources Defense Council 1152 15th St NW, Suite 300 Washington DC 20005 *(Affected Party)*									
10		Ginny King Marathon Petroleum Company 539 S Main St Findley OH 45870 *(Attorney)*									
11		Ann Curnow Natural Resource Group LLC 80 S 8th St, 1000 IDS Ctr Minneapolis MN 55402 *(Consultant)*									
12											
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