INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT

Preliminary Findings Regarding a Significant Source Modification
and the Renewal of a Part 70 Operating Permit
for Cargill, Inc. in Lake County

Significant Source Modification No.: 089-36416-00203
Part 70 Operating Permit Renewal No.: T089-36144-00203

The Indiana Department of Environmental Management (IDEM) has received an application from Cargill, Inc., located at 1100 Indianapolis Blvd., Hammond, IN 46320, for a significant source modification and renewal of its Part 70 Operating Permit issued on June 13, 2011. If approved by IDEM's Office of Air Quality (OAQ), this proposed modification would allow Cargill, Inc. to make certain changes at its existing source. Cargill, Inc. has applied for approval of the addition of two (2) silos and two (2) bucket elevators to the existing Grind and Feedhouse Area, three (3) backup emergency generators and six (6) Torpedo Heaters to the facility. In addition, this proposed modification is intended to remove emission units, permit requirements, and the enforceability of the emissions decreases from the Contemporaneous Netting Analysis attributed to the Grind Modernization Project that were established in Significant Source Modification No. 089-25241-00203. The units associated with the Grind Modernization Project were never constructed. In addition to granting construction approval for the of two (2) silos and two (2) bucket elevators to the existing Grind and Feedhouse Area, three (3) emergency generators, and six (6) Torpedo Heaters to the facility, the Significant Source Modification No. 089-36416-000203 will be the revised version of the issued SSM No. 089-25241-00203 and will be reissued without the emission unit descriptions, permit requirements, and the enforceability of the emissions decreases from the Contemporaneous Netting Analysis attributed to the Grind Modernization Project.

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

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

Hammond Public Library
564 East State Street
Hammond, IN 46320

and

IDEM Northwest Regional Office
330 W. US Highway 30, Suites E & F
Valparaiso, IN 46385

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

How can you participate in this process?

The date that this notice is published in a newspaper marks the beginning of a 30-day public comment period. If the 30th day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open.

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

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM's mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit numbers SSM 089-36416-00203 and Part 70 Operating Permit Renewal No. T089-36144-00203 in all correspondence.

Comments should be sent to:

Madhurima Moulik
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for extension 3-0868
Or dial directly: (317) 233-0868
Fax: (317) 232-6749 attn: Madhurima Moulik
E-mail: mmoulik@idem.IN.gov

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

For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

What will happen after IDEM makes a decision?

Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEM's response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM's decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above, at the local library indicated above, at the IDEM Regional Office indicated above, and the IDEM public file room on the 12th floor of the Indiana Government Center North, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251.

If you have any questions, please contact Madhurima Moulik of my staff at the above address.

Jason R. Krawczyk, Section Chief
Permits Branch
Office of Air Quality

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DRAFT

Mr. Michael Golando
Cargill, Inc.
1100 Indianapolis Blvd.
Hammond, IN 46320

Re: 089-36416-00203
Significant Source Modification

Dear Mr. Golando:

Cargill, Inc. was issued Part 70 Operating Permit Renewal No. T089-27009-00203 on June 13, 2011, for a stationary wet corn milling facility located at 1100 Indianapolis Blvd., Hammond, IN 46320. An application to modify the source was received on August 10, 2015. Pursuant to the provisions of 326 IAC 2-7-10.5, a Significant Source Modification is hereby approved as described in the attached Technical Support Document.

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

(a) Two (2) corn storage silos at the Corn Dump Pit and Receiving system, identified as 140-08-G and 140-09-G, each with a maximum throughput of 420 tons/hr, using baghouses CE-140-08-G and CE-140-09-G as control, and exhausting to bin vents 140-08-G and 140-09-G, respectively.

(b) Two (2) bucket elevators at the Corn Dump Pit and Receiving System, identified as Bucket Elevators No. 2a and 2b, using baghouse CE140-05-G as control, exhausting to stack S140-05-G.

(c) One (1) diesel-fired emergency generator, identified as 93-41-S, approved in 2015 for construction, with a rating of 496 HP, manufactured after 2009.

Under NSPS, Subpart IIII, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(d) One (1) gasoline-fired emergency generator, identified as Generac Model GP5000 (manufactured in 2009, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.16 MMBtu/hr (22.9 HP).

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(e) One (1) gasoline-fired emergency generator, identified as Honda EU7000 (manufactured in 2014, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.1 MMBtu/hr (14.3 HP).

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(f) Six (6) kerosene-fired Dayton Torpedo heaters, approved in 2016 for construction, with a total combined heat input capacity of 1.05 MMBtu/hr.

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In addition, this proposed modification is intended to remove emission units, permit requirements, and the enforceability of the emissions decreases from the Contemporaneous Netting Analysis attributed to the Grind Modernization Project that were established in Significant Source Modification No. 089-25241-00203. The units associated with the Grind Modernization Project were never constructed. In addition to granting construction approval for the of two (2) silos and two (2) bucket elevators to the existing Grind and Feedhouse Area, three (3) backup emergency generators and six (6) Torpedo Heaters to the facility, the Significant Source Modification No. 089-36416-000203 will be the revised version of the issued SSM No. 089-25241-00203 and will be reissued without the emission unit descriptions, permit requirements, and the enforceability of the emissions decreases from the Contemporaneous Netting Analysis attributed to the Grind Modernization Project.

The following construction conditions are applicable to the proposed modification:

General Construction Conditions

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

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

Effective Date of the Permit

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

Commenced Construction

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

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

Approval to Construct

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

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

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

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For the purposes of this permitting action, the Significant Permit Modification has been combined with the current Part 70 Operating Permit Renewal. Therefore, operation is not approved until the Part 70 Operating Permit Renewal has been issued.

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

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

If you have any questions on this matter, please contact Madhurima Moulik of my staff, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Madhurima Moulik or extension 3-0868 or dial (317) 233-0868.

Sincerely,

Jason R. Krawczyk, Section Chief
Permits Branch
Office of Air Quality

Attachments: Significant Source Modification and Technical Support Document
cc: File - Lake County
Lake County Health Department
U.S. EPA, Region 5
Compliance and Enforcement Branch
IDEM Northwest Regional Office

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Part 70 Significant Source Modification
OFFICE OF AIR QUALITY

Cargill, Inc.
1100 Indianapolis Blvd.
Hammond, Indiana 46320

(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.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for new and/or existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.

Significant Source Modification No.: 089-36416-00203	
Issued by: Jason R. Krawczyk, Section Chief Permits Branch Office of Air Quality	Issuance Date:

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SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary wet corn milling operation.

Source Address:	1100 Indianapolis Blvd., Hammond, Indiana IN 46320
General Source Phone Number:	(219) 659-2000
SIC Code:	2046 (Wet Corn Milling)
County Location:	Lake
Source Location Status:	Nonattainment for 8-hour ozone standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD and Emission Offset Rules Major Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

I. Anaerobic Wastewater Treatment Process

(a) One (1) anaerobic wastewater treatment process installed in July 1995. Biogas is generated in the wastewater treatment plant by anaerobic reaction. The biogas can be controlled by:

(1) Diverted to a plant process burner for energy recovery, which is the normal scenario; or

(2) One (1) Biogas Flare (Unit ID 800-04-E), installed in July 1995. The biogas flare converts the hydrogen sulfide (H_2S) in the biogas to sulfur dioxide (SO_2). The biogas flare exhausts to stack ID S800-05-E.

(b) Two (2) wastewater treatment process centrifuges (WWTP - North and WWTP - South), installed in July 1995. The centrifuges dewater the excess biomass from wastewater treatment process. Exhaust from the process vents inside the WWTP building.

II. Alternate Carbohydrate Area

(c) Alternate Carbohydrate Mill Feed Hopper (Unit 127-30-B), installed in May 1993 and repurposed in 2008, with a maximum capacity of 0.836 tons per hour. Particulate emissions are controlled by dust collector (CE127-30-B) that exhausts to stack S127-30-B.

(d) No. 1 and No. 2 Alternate Carbohydrate Storage Bins (Unit ID 127-28-B and 127-29-B), installed in May 1993 and repurposed in 2008, each with a maximum throughput of 15 tons per hour. Carbohydrate is pneumatically conveyed to these hoppers equipped with bag filter dust collectors (CE127-28-B and CE127-29-B) that exhaust to stacks S127-28-B and S127-29-B.

(e) No. 1 and No. 2 Vacuum Cleaner Systems (Unit ID 127-21-B and 127-22-B), installed in May 1993, each with a maximum throughput of 0.3 tons per hour. These systems are for building dust. Particulate emissions are controlled by dust collectors that exhaust to stacks S127-21-B and S127-22-B.

III. Grind and Feedhouse Area

(f) Gluten Dryer System equipped with an integral cyclone (Unit ID 121-01-G), installed in March 1995. Gluten meal is fed to a 12.5 MMBtu/hr natural and bio gas-fired ring dryer at a maximum throughput of 15,800 lb/hr. Particulate emissions are controlled by wet scrubber (CE121-01-G) that exhausts to stack S121-01-G.

(g) Fiber Drying Equipment (Unit ID 89-01-G), installed in October 1995. Wet fiber is fed to this 78 MMBtu/hr natural gas-fired dryer at a maximum throughput of 79,695 lb/hr. Particulate matter is controlled by a scrubber (CE89-01-G) that exhausts to stack S89-01-G.

(h) Germ Dryer/Cooler equipped with an integral cyclone (Unit ID 124A-01-G), installed in November 1994. Corn germ is fed to this 12.9 MMBtu/hr natural and bio gas-fired germ dryer and cooler at a maximum throughput of 16,580 lb/hr. Particulate emissions are controlled by one (1) scrubber (CE124A-01-G) that exhausts to stack S124A-01-G.

(i) Central Vacuum Loadout (Unit ID 200-07-G), installed in October 2000, with a maximum throughput of 100 lb/hr. Particulate emissions are controlled by a dust collector (CE200-07-G) that exhausts to stack S200-07-G.

(j) Germ Tank 1310 (Unit ID 200-01-G), installed in October 2000, with a maximum throughput of 80,000 lb/hr. Particulate emissions are controlled by a dust collector (CE200-01-G) that exhausts to stack S200-01-G.

(k) Gluten Tank 1410 (Unit ID 200-02-G), installed in October 2000, with a maximum throughput of 80,000 lb/hr. Particulate emissions are controlled by a dust collector (CE200-02-G) that exhausts to stack S200-02-G.

(l) Corn Screenings Silo (Unit ID 200-06-G), installed in October 2000 and approved in 2012 to increase airflow from 400 cubic feet per minute (cfm) to 1,200 cfm with a maximum throughput of 11,000 lb/hr. Particulate emissions are controlled by a dust collector (CE200-06-G) that exhausts to stack S200-06-G.

(m) Gluten Tank 1010 (Unit ID 200-04-G), installed in October 2000, with a maximum throughput of 21,000 lb/hr. Particulate emissions are controlled by a dust collector (CE200-04-G) that exhausts to stack S200-04-G.

(n) Germ Tank 1110 (Unit ID 200-03-G), installed in October 2000, with a maximum throughput of 30,000 lb/hr. Particulate emissions are controlled by a dust collector (CE200-03-G) that exhausts to stack S200-03-G.

(o) Bulk Loadout (Unit ID 200-05-G), installed in October 2000, with a maximum

throughput of 95,900 lb/hr. Particulate emissions are controlled by a dust collector (CE200-05-G) that exhausts to stack S200-05-G.

(p) Corn Dump Pit (Unit ID 140-05-G), installed in December 1995, with a maximum throughput of 840 tons/hr. Particulate emissions are controlled by filter baghouse (CE140-05-G) that exhausts to stack S140-05-G.

(q) Corn Elevator Conveying (Unit ID 140-07-G), installed in December 1995, with a maximum throughput of 140 tons/hr. Material is transferred from corn belt 1 to corn belt 2. Particulate emissions are controlled by a filter baghouse (CE140-07-G) that exhausts to stack S140-07-G.

(r) Corn Receiving and Storage, installed in December 1995. This system includes six Storage Bins, each with its own bin vent for control of particulate emissions, and each with a maximum throughput of 420 ton/hr:

(1) Bin #1: Unit ID 140-01-G
(2) Bin #2: Unit ID 140-02-G
(3) Bin #3: Unit ID 140-03-G
(4) Bin #4: Unit ID 140-04-G
(5) Bin #5: Unit ID 33-01-G
(6) Bin #6: Unit ID 33-02-G

(s) Gravity Take-up Conveyor (Corn Scale) (Unit ID 140-06-G), installed in December 1995, with a maximum throughput of 140 ton/hr. Corn is transferred from corn belt 2 to corn belt 3. Particulate emissions are controlled by baghouse (CE140-06-G) that exhausts to stack S140-06-G.

(t) Corn Cleaner (Unit ID 33-03-G), installed in December 1995, with a maximum throughput of 140 ton/hr. Corn passes through mechanical cleaners. Particulate emissions are controlled by a filter baghouse (CE33-03-G) that exhausts to stack S33-03-G.

(u) Three (3) Gluten Filters, installed in December 1995. Gluten slurry is applied to the surface of a filter drum where an internal vacuum on the drum removes moisture from the slurry. The Gluten is then removed from the drum by a roller. Exhaust from the removal process is collected by a hood and exhausted from the building.

(v) Three (3) Gluten Vacuum Pumps, installed in December 1995. The pumps create the vacuum used to remove moisture from the gluten slurry on the gluten filter. Exhaust from the pumps is vented from the building.

(w) Twenty-four (24) steep tanks (Unit ID Steephouse - Grind 1), consisting of 21 steep tanks installed prior to 1973 and 3 steep tanks installed in December 1995. The steep tanks contain a mildly acidic solution to soften the corn prior to milling. Tanks are individually vented and have only working/breathing losses.

(x) The following units, approved in 2016 for construction:

(1) Two (2) corn storage silos at the Corn Dump Pit and Receiving system, identified as 140-08-G and 140-09-G, each with a maximum throughput of 420 tons/hr, using baghouses CE-140-08-G and CE-140-09-G as control, and exhausting to stacks 140-08-G and 140-09-G, respectively.

(2) Two (2) bucket elevators at the Corn Dump Pit and Receiving System, identified as Bucket Elevators No. 2a and 2b, using baghouse CE140-05-G as control, exhausting to stack S140-05-G.

IV. Utility Area

The Utility area includes the following boiler used to supply steam for plant processes.

(y) Natural gas-fired Package Boiler #1 (Unit ID 89-03-U), installed in 2006, with a maximum heat input capacity of 247 million Btu/hr, and exhausting to stack S89-03-U. Under NSPS 40 CFR 60 Subpart Db, Package Boiler #1 is a steam-generating unit with a heat input capacity greater than 100 million Btu/hr. Under NESHAP 40 CFR 63, Subpart DDDDD, this boiler is an existing affected unit.

V. Refinery Area

(z) Corn Syrup Spray Dryer #4 (Unit ID 100-03-R), installed in April 1992. Corn syrup is fed to a dryer at a maximum throughput of 4.8 ton/hr. The solids are sent through cyclones to a packing area. Particulate emissions are controlled by a wet scrubber (CE100-03-R) that exhausts to stack S100-03-R.

(aa) Corn Syrup Spray Dryer/Cooler System #3 (Unit ID 100-01-R), installed in July 1987. Corn syrup is fed to a dryer at a maximum rate of 4.8 ton/hr. The solids are sent through cyclones to a packing area. Particulate emissions are controlled by a wet venturi scrubber (CE100-01-R) that exhausts through stack S100-01-R.

(bb) Activated Carbon Regeneration Furnace #2 (Unit ID 104-01-R), installed in July 1995. Spent carbon is regenerated in this 13.2 MMBtu/hr natural gas-fired furnace at a maximum throughput of 1.146 ton/hr. Emissions are controlled by a venturi scrubber and an impingement furnace scrubber (CE104-01-R) that exhaust through stack S104-01-R.

(cc) Liquid Soda Ash Tank (Unit ID 104-02-R), installed in July 1995, with a maximum throughput of 15 ton/hr. Particulate emissions from loading this tank are controlled by a venturi scrubber (CE104-02-R) that exhausts to stack S104-02-R.

(dd) Filter Aid Hopper (Unit ID 104-03-R), installed in July 1995, with a maximum throughput of 0.75 ton/hr. This hopper is equipped with a jet pulse baghouse (CE104-03-R) that exhausts to stack S104-03-R.

(ee) Sodium Bisulfite Bag Dump (Unit ID 104-05-R), installed in July 1995, with a maximum throughput of 0.7 ton/hr. This unit is controlled by a jet pulse baghouse (CE104-05-R) that exhausts to stack S104-05-R.

(ff) Diatomaceous Earth Unloading (Unit ID 104-08-R), installed in November 1998**,** with a maximum throughput of 1.75 ton/hr. Diatomaceous earth (filter aid) is unloaded from railcar to silo. Particulate emissions are controlled by a Bin Vent Filter (DC2312) that exhausts to stack S104-08-R.

(gg) Citric Acid Dump Station (Unit ID 104-09-R), installed in November 1998, with a maximum throughput of 30 lb/hr. Citric Acid is added during the production of corn syrup. Particulate emissions are controlled by a built-in dust collector (CE104-09-R) that exhausts to stack S104-09-R.

(hh) Refinery Vacuum Pumps (1-3) (Unit IDs RVF 1-1, RVF 1-2, and RVF 1-3

Precoating Vacuum Pump), installed in July 1995. The pumps create the vacuum used to pull liquid corn syrup through a filtering media. Exhaust from the pumps is vented from the building.

(ii) Refinery Vacuum Pumps (4-6) (Unit IDs RVF 3-1, RVF 3-2, and RVF 3-3 Precoating Vacuum Pump), installed in November 1999. The pumps create the vacuum used to pull liquid corn syrup through a filtering media. Exhaust from the pumps is vented from the building.

(jj) Refinery Vacuum Pumps (7-8) (Unit IDs RVF 2-1 and RVF 2-2), installed in July 1995. The pumps create the vacuum used to pull liquid corn syrup through a filtering media. Exhaust from the pumps is vented from the building.

(kk) Two (2) HCL tanks (Unit ID HCL Tank – Refinery), installed in July 1995 and December 2002. Tanks store HCl used in the corn syrup manufacturing process. The tanks vent to an acid fume scrubber.

VI. Starch Production Area

(ll) Batch Scale Hopper #1 (Unit ID 34-01-S), installed in January 1991, with a maximum throughput of 24 ton/hr. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34-01-S) that exhausts to stack S34-01-S.

(mm) Dextrin Starch Reactor #1 (Unit ID 34-02-S), installed in January 1991, with a maximum throughput of 6 ton/hr. Dried cornstarch is fed to a reactor heated by steam from the plant boiler. Particulate emissions are controlled by a bag filter dust collector (CE34-02-S) that exhausts to stack S34-02-S.

(nn) Dextrin Starch Cooler #1 (Unit ID 34-03-S), installed in January 1991, with a maximum throughput of 6 ton/hr. Roasted cornstarch is fed to a cooler and transferred to a hopper for storage. Particulate emissions are controlled by a bag filter dust collector (CE34-03-S) that exhausts to stack S34-03-S.

(oo) Surge Hopper #1 (Unit ID 34-05-S), installed in January 1991, with a maximum throughput of 6 ton/hr. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34-05-S) that exhausts to stack S34-05-S.

(pp) Batch Scale Hopper #2 (Unit ID 34B-13-S), installed in October 1993, with a maximum throughput of 24 ton/hr. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34B-13-S) that exhausts to stack S34B-13-S.

(qq) Dextrin Starch Reactor #2 (Unit ID 34B-04-S), installed in October 1993, with a maximum throughput of 6 ton/hr. Dried cornstarch is fed to a reactor heated by steam from the plant boiler. Particulate emissions are controlled by a bag filter dust collector (CE34B-04-S) that exhausts to stack S34B-04-S.

(rr) Dextrin Starch Cooler #2 (Unit ID 34B-01-S), installed in October 1993, with a maximum throughput of 6 ton/hr. Roasted cornstarch is fed to a cooler and transferred to a hopper for storage. Particulate emissions are controlled by dust collector (CE34B-01-S) that exhausts to stack S34B-01-S.

(ss) Surge Hopper #2 (Unit ID 34B-03-S), installed in October 1993, with a maximum throughput of 6 ton/hr. Starch is pneumatically conveyed to a hopper.

Particulate emissions are controlled by a bag filter dust collector (CE34B-03-S) that exhausts to stack S34B-03-S.

(tt) Dextrin Feed Hoppers #3 and #4 (System #2) (Unit IDs 34B-05-S and 34B-06-S), installed in October 1993, each with a maximum throughput of 6 ton/hr. Starch is gravity conveyed to these hoppers. Particulate emissions are controlled by bag filter dust collectors (CE34B-05-S and CE34B-06-S) that exhaust to stacks S34B-05-S and S34B-06-S.

(uu) Dextrin Bulk Loading Equipment (Unit ID 48-09-S), installed before 1977, with a maximum throughput of 30 ton/hr. Starch is pneumatically conveyed to this hopper. Particulate emissions are controlled by a bag filter dust collector (CE48-09-S) that exhausts to stack S48-09-S.

(vv) Starch Ring Dryer #2 (Unit ID 59-03-S), installed in November 1993. Starch is fed to this 25 MMBtu/hr natural gas-fired ring dryer at a maximum throughput of 13.5 ton/hr. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by a wet scrubber (CE59-03-S) that exhausts to stack S59-03-S.

(ww) Starch Ring Dryer #3 (Unit ID 125-01-S), installed in May 1980. Cornstarch is fed to this 62 MMBtu/hr natural gas-fired ring dryer at a maximum throughput of 26.55 ton/hr. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by a wet scrubber (CE125-01-S) that exhausts to stack S125-01-S.

(xx) Special Starch Process with Starch Ring Dryer #4 (Unit ID 128-01-S), installed in December 1993. Cornstarch is fed to this 30 MMBtu/hr natural gas-fired dryer at a maximum throughput of 12.5 ton/hr. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by wet scrubber (CE128-01-S) that exhausts to stack S128-01-S.

(yy) Reactors #2 through #8 (Unit IDs 128-07-S through 128-13-S), installed in November 1988 (2-4) and December 1991 (5-8), each can process up to 40 tons of starch. Cornstarch and propylene oxide are reacted through Reactors 2, 3, 4, and 7 only. When propylene oxide is used, each reactor can use up to 5 tons of propylene oxide per batch. When propylene oxide is used in the starch reaction, VOC emissions are controlled by a thermal oxidizer S128-14-S that exhausts to stack S128-14-S.

(zz) Sodium Sulfate Storage Bin (Unit ID 128-25-S), installed in October 2000, with a maximum throughput of 1.1 ton/hr. Particulate emissions are controlled by a bin vent dust collector (FA1900), that exhausts to stack S128-25-S.

(aaa) Sodium Sulfate Weigh Bin (Unit ID 128-26-S), installed in October 2000, with a maximum throughput of 1.1 ton/hr. Particulate emissions are controlled by a bin vent dust collector (FA1950), that exhausts to stack S128-26-S.

(bbb) Cornstarch Storage Bins #20 through #36 (Unit IDs 120-01-S through 120-17-S), installed in July 1990 and approved in 2011 for modification to increase airflow into Cornstarch Storage Bin No. 23 (ID 120-04-S) to allow for the milled starch from the Nos. 1 and 2 Starch Milling Systems to directly convey starch to Cornstarch Storage Bin No. 23 (ID 120-04-S), each with a maximum throughput of 75 ton/hr. Cornstarch is pneumatically conveyed to these storage bins. Particulate emissions are controlled by bag filter dust collectors that exhaust to stacks S120-01-S through S120-17-S.

(ccc) Waxy Cornstarch Bulk Storage Bins #95 through #98 (Unit IDs 126-01-S through 126-04-S), replaced in January 1996, each with a maximum throughput of 20.5 ton/hr. Waxy cornstarch is conveyed to these bins. Particulate emissions are controlled by dust collectors (CE126-01-S through CE126-04-S) that exhaust to stacks S126-01-S through S126-04-S.

(ddd) Cornstarch Blending Systems #1 through #4 (Unit IDs 130-01-S through 130-04-S), installed in April 1988, each with a maximum throughput of 30 ton/hr. Cornstarch is blended and moved to the warehouse for packing. Particulate emissions are controlled by bag filter dust collectors (CE130-01-S through 130-04-S) that exhaust to stacks S130-01-S through S130-04-S.

(eee) Dextrin Blender (Unit ID 130-05-S), installed in October 1993, with a maximum throughput of 30 ton/hr. Cornstarch is blended and moved to the warehouse for packing. Particulate emissions are controlled by a bag filter dust collector (CE130-05-S) that exhausts to stack S130-05-S.

(fff) One (1) propylene oxide tank, approved in 2015 for construction, identified as 93-18-S, with a maximum capacity of 28,000 gallons, equipped with a thermal oxidizer (CE93-41-S). This tank also provides propylene oxide to other starch processes.

(fff1) One (1) 28,000 gallon horizontal propylene oxide tank (Unit ID 93-18-S), installed in 1988, with 95% efficient vapor recovery (liquid nitrogen condenser). This tank also provides propylene oxide to other starch processes.

(ggg) Bldg 128 Tank Farm A, approved in 2015 for construction. Tanks include HCl, hydrogen peroxide, sodium hypochlorite and sodium Bisulfate storage tanks. The tanks vent to an acid fume scrubber.

(ggg1) Bldg 128 Tank Farm, installed in November 1999. Tanks include HCl, Acetic Anhydride, Sodium Bisulfate storage tanks, and the Acetic/Adipic mix tank.

VII. Starch Warehouse Area

(hhh) Channel 2 Receiver (Unit ID 93-32-W), installed in September 2000, with a maximum throughput of 15 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-32-W.

(iii) Channel 3 Receiver (Unit ID 93-33-W), installed in September 2000, with a maximum throughput of 25 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-33-W.

(jjj) Channel 4 Receiver (Unit ID 93-34-W), installed in September 2000, with a maximum throughput of 15 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-34-W.

(kkk) Channel 6 Receiver (Unit ID 93-35-W), installed in September 2000, with a maximum throughput of 4.5 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-35-W.

(lll) Channel 4/6 Packing (Unit ID 93-37-W), installed in September 2000, with a maximum throughput of 40 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-37-W.

(mmm) Channel 2/3 Packing (Unit ID 93-36-W), installed in September 2000, with a maximum throughput of 40 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-36-W.

(nnn) Central Vacuum System (Unit ID 93-38-W), installed in October 2000, with a maximum throughput of 100 lb/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-38-W.

(ooo) Dried Corn Syrup Conveying System (Unit ID 93-04-W), installed in July 1976, with a maximum throughput of 15 ton/hr. Particulate emissions are controlled by a baghouse (CE93-04-W) that exhausts to stack S93-04-W.

(ppp) Corn Syrup Solids Conveying System (Unit ID 93-05-W), installed in July 1976, with a maximum throughput of 10 ton/hr. Particulate emissions are controlled by a baghouse (CE93-05-W) that exhausts to stack S93-05-W.

(qqq) Frodex Semi-bulk Packing System (Unit ID 93-08-W), installed in September 1989, with a maximum throughput of 10 ton/hr. Particulate emissions are controlled by a baghouse (CE93-08-W) that exhausts to stack S93-08-W.

(rrr) Cornstarch Bag Dumping Stations #1 and #2 (Unit IDs 93-09-W and 93-10-W), installed in April 1988, each with a maximum throughput of 1.2 ton/hr. Particulate emissions are controlled by bag filter dust collectors (CE93-09-W and CE93-10-W) that exhaust to stacks S93-09-W and S93-10-W.

(sss) Starch Bulk Loading (Unit ID 93-14-W), installed in April 1995, with a maximum throughput of 30 ton/hr. Particulate emissions are controlled by a baghouse (CE93-14-W) that exhausts to stack S93-14-W.

(ttt) Starch Bulk Loading Vacuum Cleanup System (Unit ID 93-15-W), installed in February 1994, with a maximum throughput of 1 ton/hr. Cleanup for cornstarch spills. Particulate emissions are controlled by bag filter dust collector (CE93-15-W) that exhausts to stack S93-15-W.

(uuu) Starch Mixing and Bulk Bagging Systems #1 and #2 (Unit IDs 93-16-W and 93-17-W), installed in August 1995, each with a maximum throughput of 25 ton/hr and 12.5 ton/hr, respectively. Particulate emissions are controlled by baghouses (CE93-16-W and CE93-17-W) that exhaust to stacks S93-16-W and S93-17-W.

(vvv) P.G. Starch Receiver (Unit ID 93-18-W), installed in September 1999, with a maximum throughput of 3 ton/hr. Starch is received from P.G. starch roll dryers for packaging. Particulate emissions are controlled by a dust collector (CE93-18-W) that exhausts to stack S93-18-W.

(www) P.G. Starch Packing (Unit ID 93-39-W), installed in January 2000, with a maximum throughput of 3 ton/hr. Particulate emissions are controlled by a dust collector (CE93-39-W) that exhausts to stack S93-39-W.

(xxx) Corn Syrup Solids Manufacturing System #5, approved in 2010 for construction, identified as Unit ID 93-40-W, with a maximum capacity of 6,000 lbs/hr (dry basis), using dust collector (CE93-40-W) as control, and exhausting to stack S93-40-W.

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

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

(a) Combustion source flame safety purging on startup.

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

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

(d) VOC and HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

(e) VOC and HAP vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

(f) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.

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

(h) Cleaners and solvents characterized as follows:

(1) having a vapor pressure equal to or less than 2 kPa; 15mm Hg; or 0.3 psi measured at 38°C (100°F) or;

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

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

(j) Closed loop heating and cooling systems.

(k) Structural steel and bridge fabricating activities using 80 tons or less of welding consumables.

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

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

(n) Operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs.

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

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

(q) Heat exchanger cleaning and repair.

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

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

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

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

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

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

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

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

(z) Filter or coalesce media changeout.

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

(bb) One (1) diesel-fired emergency generator (compression ignition), identified as 93-41-S, approved in 2016 for construction, with a rating of 496 HP, manufactured after 2009.

Under NSPS, Subpart IIII, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(cc) One (1) gasoline-fired emergency generator, identified as Generac Model GP5000 (manufactured in 2009, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.16 MMBtu/hr.

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(dd) One (1) gasoline-fired emergency generator, identified as Honda EU7000 (manufactured in 2014, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.1 MMBtu/hr.

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(ee) Six (6) kerosene-fired Dayton Torpedo heaters, approved in 2016 for construction, with a total combined heat input capacity of 1.05 MMBtu/hr.

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

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

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

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

SECTION B GENERAL CONDITIONS

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

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

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

(a) This permit, T089-36144-00203, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

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

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

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

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

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

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

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

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

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

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

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Northwest Regional Office phone: (219) 464-0233; fax: (219) 464-0553**.**

(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 T089-36144-00203 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

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

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

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

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

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

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

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit.

[326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

(1) That this permit contains a material mistake.

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

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

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

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

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

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

Request for renewal shall be submitted to:

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

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

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

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if,

subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(4) The Permittee notifies the:

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

and

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

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

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

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

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

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

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

(3) Any change in emissions; and

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SECTION C **SOURCE OPERATION CONDITIONS**

Entire Source

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

C.1 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 twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

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

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

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

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

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

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

C.5 Stack Height [326 IAC 1-7]

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

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

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

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work

or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

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

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

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

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

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

C.7 Performance Testing [326 IAC 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.8 Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

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

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

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

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

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

(d) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

C.10 Continuous Compliance Plan [326 IAC 6.8-8-1] [326 IAC 6.8-8-8]

(a) Pursuant to 326 IAC 326 IAC 6.8-8-1, the Permittee shall submit to IDEM and maintain at source a copy of the Continuous Compliance Plan (CCP). The Permittee shall perform the inspections, monitoring and record keeping in accordance with the information in 326 IAC 6.8-8-5 through 326 IAC 6.8-8-7 or applicable procedures in the CCP.

(b) Pursuant to 326 IAC 6.8-8-8, the Permittee shall update the CCP, as needed, retain a copy of any changes and updates to the CCP at the source and make the updated CCP available for inspection by the department. The Permittee shall submit the updated CCP, if required to IDEM, OAQ within thirty (30) days of the update.

(c) Pursuant to 326 IAC 6.8-8, failure to submit a CCP, maintain all information required by the CCP at the source, or submit update to a CCP is a violation of 326 IAC 6.8-8.

C.11 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment.

(b) In the event that a breakdown of a continuous emission monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

(c) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 40 CFR 60, Subpart Db.

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. The analog instrument shall be capable of measuring values outside of the normal range.

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

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

C.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 maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

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

C.14 Risk Management Plan [326 IAC 2-7-5(11)] [40 CFR 68]

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

C.15 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5] [326 IAC 2-7-6]

(l) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, in this permit:

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

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

(1) initial inspection and evaluation;

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

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

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

(1) monitoring results;

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

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

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

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

(II)

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

(1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(2) Determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

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

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

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

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

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

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

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

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

(h) *CAM recordkeeping requirements.*

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

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

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

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

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(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] [326 IAC 2-2][326 IAC 2-3]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable:
(AA) All calibration and maintenance records.
(BB) All original strip chart recordings for continuous monitoring instrumentation.
(CC) Copies of all reports required by the Part 70 permit.
Records of required monitoring information include the following, where applicable:
(AA) The date, place, as defined in this permit, and time of sampling or measurements.
(BB) The dates analyses were performed.
(CC) The company or entity that performed the analyses.
(DD) The analytical techniques or methods used.
(EE) The results of such analyses.
(FF) The operating conditions as existing at the time of sampling or measurement.
These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of

permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

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

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

(A) A description of the project.

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

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

(i) Baseline actual emissions;

(ii) Projected actual emissions;

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

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

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

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

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

C.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2][326 IAC 2-3] [40 CFR 64][326 IAC 3-8]

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

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

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

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

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

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

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

(b) The address for report submittal is:

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

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

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

(e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (oo) and/or 326 IAC 2-3-1 (jj)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

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

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

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

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

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

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

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

Reports required in this part shall be submitted to:

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

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

Stratospheric Ozone Protection

C.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.0 EMISSIONS UNIT OPERATION CONDITIONS - Source Wide Limitations

Source-Wide Operations

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

D.0.1 Consent Decree Limitations

Pursuant to the Consent Decree entered by the United States District Court for the District of Minnesota on March 3, 2006 in United States v. Cargill, Inc. No. 05-2037 (D.Minn.), the Permittee shall comply with the following emission limitations:

Emission Source Description	EU or Emission Point ID	VOC (lb/hr)	CO (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)
Batch Scale Hopper #1	34-01-S	0.07	-	-	-
Dextrin Starch Reactor #1	34-02-S	0.27	-	-	-
Dextrin Starch Cooler #1	34-03-S	0.06	-	-	-
Surge Hopper #1	34-05-S	0.17	-	-	-
Dextrin Starch Cooler #2	34B-01-S	0.06	-	-	-
Surge Hopper #2	34B-03-S	0.17	-	-	-
Dextrin Starch Reactor #2	34B-04-S	0.27	-	-	-
Dextrin Feed Hopper #3 (System #2)	34B-05-S	0.02	-	-	-
Dextrin Feed Hopper #4 (System #2)	34B-06-S	0.02	-	-	-
Batch Scale Hopper #2	34B-13-S	0.10	-	-	-
Dextrin Bulk loading Equipment	48-09-S	0.39	-	-	-
Starch Ring Dryer #2	59-03-S	1.19	19.00	-	-
Dried Corn Syrup Conveying System	93-04-W	0.03	-	-	-
Corn Syrup Solids Conveying System	93-05-W	0.03	-	-	-
Frodex Semi-Bulk Packing System	93-08-W	0.03	-	-	-
Cornstarch Bag Dumping Station #1	93-09-W	0.02	-	-	-
Cornstarch Bag Dumping Station #2	93-10-W	0.02	-	-	-
Starch Bulk Loading	93-14-W	0.09	-	-	-
Starch Bulk loading Vacuum System	93-15-W	0.01	-	-	-
Starch Mixing and Bagging System #1	93-16-W	0.05	-	-	-
Starch Mixing and Bagging System #2	93-17-W	0.10	-	-	-
P.G. Starch Receiver	93-18-W	0.13	-	-	-
Channel 2 Receiver	93-32-W	0.08	-	-	-
Channel 3 Receiver	93-33-W	0.08	-	-	-
Channel 4 Receiver	93-34-W	0.08	-	-	-
Channel 6 Receiver	93-35-W	0.06	-	-	-

Emission Source Description	EU or Emission Point ID	VOC (lb/hr)	CO (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)
Channel 2/3 Packing	93-36-W	0.39	-	-	-
Channel 4/6 Packing	93-37-W	0.39	-		-
Central Vacuum System	93-38-W	0.02	-	-	-
P.G. Starch Packing	93.39-W	0.05	-	-	-
Corn Syrup Spray Dryer/Cooler System #3	100-01-R	0.50	1.00	-	-
Corn Spray Dryer #4	100-03-R	0.86	1.00	-	-
Activated Carbon Regeneration Furnace #2	104-01-R	10 ppm or 95% destruction	100 ppm or 90% destruction	0.11	5.0
Cornstarch Storage Bin #20	120-01-S	0.05	-	-	-
Cornstarch Storage Bin #21	120-02-S	0.05	-	-	-
Cornstarch Storage Bin #22	120-03-S	0.05	-	-	-
Cornstarch Storage Bin #23, including Starch Milling System #1 and Starch Milling System #2	120-04-S	0.05	-	-	-
Cornstarch Storage Bin #24	120-05-S	0.05	-	-	-
Cornstarch Storage Bin #25	120-06-S	0.05	-	-	-
Cornstarch Storage Bin #26	120-07-S	0.05	-	-	-
Cornstarch Storage Bin #27	120-08-S	0.05	-	-	--
Cornstarch Storage Bin #28	120-09-S	0.05	-	-	-
Cornstarch Storage Bin #29	120-10-S	0.05	-	-	-
Cornstarch Storage Bin #30	120-11-S	0.05	-	-	-
Cornstarch Storage Bin #31	120-12-S	0.05	-	-	-
Cornstarch Storage Bin #32	120-13-S	0.05	-	-	-
Cornstarch Storage Bin #33	120-14-S	0.05	-	-	-
Cornstarch Storage Bin #34	120-15-S	0.05	-	-	-
Cornstarch Storage Bin #35	120-16-S	0.05	-	-	-
Cornstarch Storage Bin #36	120-17-S	0.05	-	-	-
Fiber Drying Equipment	89-01-G	10.57	-	3.95	-
Gluten Dryer System	121-01-G	3.72	2.95	0.68	-
Germ Dryer/Cooler	124A-01-G	3.97	0.46	0.77	-
Starch Ring Dryer #3	125-01-S	0.86	6.00	-	-
Waxy Cornstarch Bulk Storage Bins #95	126-01-S	0.18	-	-	-
Waxy Cornstarch Bulk Storage Bins #96	126-02-S	0.18	-	-	-
Waxy Cornstarch Bulk Storage Bins #97	126-03-S	0.18	-	-	-
Waxy Cornstarch Bulk Storage Bins #98	126-04-S	0.18	-	-	-
Sp. Starch Process with Starch Ring Dryer #4	128-01-S	0.90	6.00	-	-
Thermal Oxidizer	S128-14-S	1.33	8.61	-	-
Cornstarch Blending System #1	130-01-S	0.04	-	-	-
Cornstarch Blending System #2	130-02-S	0.04	-	-	-

Emission Source Description	EU or Emission Point ID	VOC (lb/hr)	CO (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)
Cornstarch Blending System #3	130-03-S	0.04	-	-	-
Cornstarch Blending System #4	130-04-S	0.04	-	-	-
Dextrin Blender	130-05-S	0.09	-	-	-
Germ Tank 1310	200-01-G	0.16	-	-	-
Gluten Tank 1410	200-02-G	0.16	-	-	-
Germ Tank 1110	200-03-G	0.16	-	-	-
Gluten Tank 1010	200-04-G	0.16	-	-	-
Bulk Loadout	200-05-G	3.89	-	-	-
Biogas Flare	800-05-E	0.78	1.71	-	-
HCL Tank - Refinery		0.08	-	-	-
Bldg 128 Tank Farm		0.08	-	-	-
3 Gluten Filters		0.42	-	-	-
3 Gluten Vacuum Pumps		0.77	-		-
Refinery Vacuum Pumps (1-3)		0.43	-	-	-
Refinery Vacuum Pumps (4-6)		0.64	-	-	-
Refinery Vacuum Pumps (7-8)		0.64	-	-	-
WWTP Centrifuges (2)		0.04	-	-	-

*Note - in order to avoid duplication of requirements the above units are also subject to the following compliance determination, compliance monitoring, recordkeeping and reporting conditions: D.1.5, D.1.6, D.1.7, D.1.8, D.3.16, D.3.17, D.3.19, D.3.20, D.5.12, D.5.13, D.5.15, D.5.16, D.6.6, D.6.12, D.6.13, and D.6.15.

D.0.2 State Implementation Plan

Pursuant to the Consent Decree entered by the United States District Court for the District of Minnesota on March 3, 2006 in United States v. Cargill, Inc. No. 05-2037 (D.Minn.), the Permittee shall apply to have the limitations in Condition D.0.1 incorporated into the State Implementation Plan.

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

D.0.3 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.0.1, D.3.6, D.5.3, and D.6.3, the Permittee shall perform VOC testing on the following units utilizing methods as approved by the Commissioner.

Emission Source Description	EU or Emission Point ID
Starch Ring Dryer #2	59-03-S
Corn Syrup Spray Dryer/Cooler System #3	100-01-R
Corn Spray Dryer #4	100-03-R
Fiber Drying Equipment	89-01-G
Gluten Dryer System	121-01-G
Germ Dryer/Cooler	124A-01-G
Starch Ring Dryer #3	125-01-S

Emission Source Description	EU or Emission Point ID
Sp. Starch Process with Starch Ring Dryer #4	128-01-S
Thermal Oxidizer	S128-14-S
3 Gluten Filters	
3 Gluten Vacuum Pumps	
HCL Tank - Refinery	
Bldg 128 Tank Farm	

In order to demonstrate compliance with Conditions D.0.1 and D.6.3, the Permittee shall perform VOC testing on thermal oxidizer S128-14-S 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 testing required by this condition.

(b) In order to demonstrate compliance with Condition D.0.1, the Permittee shall perform CO testing on the following units utilizing methods as approved by the Commissioner.

Emission Source Description	EU or Emission Point ID
Thermal Oxidizer	S128-14-S
Activated Carbon Regeneration Furnace #2	104-01-R

In order to demonstrate compliance with Conditions D.0.1, the Permittee shall perform CO testing on thermal oxidizer S128-14-S 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 testing required by this condition.

(c) In order to demonstrate compliance with Condition D.0.1, the Permittee shall perform SO_2 testing on the following units utilizing methods as approved by the Commissioner.

Emission Source Description	EU or Emission Point ID
Fiber Drying Equipment	89-01-G
Gluten Dryer System	121-01-G
Germ Dryer/Cooler	124A-01-G
Activated Carbon Regeneration Furnace #2	104-01-R

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 testing required by this condition.

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

D.0.4 Parametric Monitoring for Temperature

(a) Desorption inlet temperature shall be measured with a thermocouple located in the inlet of the desorption zone.

(b) The accuracy of the thermocouple shall be verified by a second, or redundant, thermocouple probe inserted at the inlet to the desorption zone. This validation check will be conducted annually. The acceptance criterion is ±30°F. Alternatively, the thermocouple can be recalibrated annually. The minimum tolerance of the thermocouple is ±4°F or ±0.75% of the temperature, whichever is greater.

(c) The three (3) hour average temperature shall be calculated as the average of the readings (except that the average need only be calculated if readings occur below the specified temperature level).

(d) The temperature shall be monitored continuously and the temperature recorded at least once every fifteen (15) minutes (a minimum of four (4) equally spaced readings per hour).

(e) An excursion is defined as a three (3) hour period during which the average temperature measured is lower than the specified indicator value as determined in the most recent valid compliance stack test. The three (3) hour average temperature will be calculated when the temperature recorder indicates readings below the specified temperature.

If a condition exists which would result in response steps, the Permittee shall take reasonable response steps. Section C - Response to Excursion or Exceedances contains the Permittee's obligations 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.0.5 Parametric Monitoring for Scrubbers

The Permittee shall monitor and record the recirculation water flow rate (if applicable) and pH of the scrubbing liquid for the wet gas scrubbers associated with units 89-01-G, 121-01-G, 124A-01-G, and 104-01-R at least once per day when the process is in operation. The Permittee shall maintain the flow rate at or above the minimum in the table below. When for any one reading, the flow rate is below the above mentioned minimum, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A reading that is below the above mentioned minimum flow rate is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Scrubber ID	Minimum Flow Rate of Scrubbing Liquor (gallons/minute)	pH of Scrubbing Liquor
CE89-01-G	400	7.0
CE121-01-G	N/A	5.5
CE124A-01-G	N/A	5.5
CE104-01-R	N/A	7.0

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

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

D.0.6 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

(a) To document the compliance status with Condition D.0.4, the following record keeping shall be maintained onsite:

(1) Description of measuring device (digital data acquisition systems),

(2) Data from the device and any temporary data logged manually as back-up,

(3) Excursions,

(4) Corrective actions taken, and

(5) Calibration records.

(b) To document the compliance status with condition D.0.5, the Permittee shall maintain the once per day records of the water recirculation flow rate and pH during normal operation. The Permittee shall include in its daily record when recirculation water flow and pH are not taken and the reason for the lack of recirculation water flow rate and pH (e.g. the process did not operate that day).

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS - Wastewater Treatment Process

Emissions Unit Description: I. Wastewater Treatment Process

(a) One (1) anaerobic wastewater treatment process installed in July 1995. Biogas is generated in the wastewater treatment plant by anaerobic reaction. The biogas can be controlled by:

(1) Diverted to a plant process burner for energy recovery, which is the normal scenario; or

(2) One (1) Biogas Flare (Unit ID 800-04-E), installed in July 1995. The biogas flare converts the hydrogen sulfide (H_2S) in the biogas to sulfur dioxide (SO_2). The biogas flare exhausts to stack ID S800-05-E.

(b) Two (2) wastewater treatment process centrifuges (WWTP - North and WWTP - South), installed in July 1995. The centrifuges dewater the excess biomass from wastewater treatment process. Exhaust from the process vents inside the WWTP building.

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

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

D.1.1 H_2S PSD Minor Limit [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:

All biogas shall either be combusted for energy recovery in a plant process or combusted in the Biogas Flare (Unit ID 800-04-E) such that H_2S emissions shall be limited to less than ten (10) tons per twelve (12) consecutive month period.

Compliance with the above limit shall limit H_2S emissions from the anaerobic wastewater treatment process to less than ten (10) tons per twelve (12) consecutive month period and render 326 IAC 2-2 not applicable.

D.1.2 SO_2 PSD Minor Limit [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:

All biogas shall either be combusted for energy recovery in a plant process or combusted in the Biogas Flare (Unit ID 800-04-E) such that SO_2 emissions shall be limited to less than forty (40) tons per twelve (12) consecutive month period.

Compliance with the above limit shall limit SO_2 emissions from the anaerobic wastewater treatment process to less than forty (40) tons per twelve (12) consecutive month period and render 326 IAC 2-2 not applicable.

D.1.3 Lake County Sulfur Dioxide Emission Limitations [326 IAC 7-4.1-5]

Pursuant to 326 IAC 7-4.1-5 (Lake County Sulfur Dioxide Emission Limitations), emissions of sulfur dioxide from the Biogas Flare (Unit ID 800-04-E) shall not exceed 9.13 pounds per hour.

D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.1.5 Compliance Determination Requirements

In order to assure compliance with Condition D.1.1, the biogas stream from anaerobic reaction shall be diverted to an active plant process burner or to the biogas flare at all times that a biogas stream is being generated.

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

D.1.6 Biogas Sampling

The Permittee shall perform bimonthly sampling of the biogas generated by the anaerobic digester. Samples shall be analyzed for H2S and SO2 content and H2S and SO2 emissions calculated using the following mass balance equations:

$$H2Ss\left({}^{lb}/_{hr}\right) * CE = H2S\left({}^{lb}/_{hr}\right) * 8760\left({}^{hr}/_{yr}\right) * \frac{1\ ton}{2000\ lb} = H2S\left({}^{ton}/_{yr}\right)$$

$$\left[H2S\left({}^{lb}/_{hr}\right) * \frac{MWSO2}{MWH2S}\right] + SO2s = SO2\left({}^{lb}/_{hr}\right) * 8760\left({}^{hr}/_{yr}\right) * \frac{1\ ton}{2000lb} = SO2\left({}^{ton}/_{yr}\right)$$

Where:

$H2S_s$ = The H2S emissions from the sample in pounds per hour.
CE = The control efficiency/ rate at which the flare converts H2S to SO2 is 99.9%.
MWH2S = The molecular weight of H2S is 34.08.
MWSO2 = The molecular weight of SO2 is 64.06.
SO2s = The SO2 emissions from the sample in pounds per hour.

D.1.7 Flame Presence [40 CFR 64]

The Permittee shall monitor and record the flame presence for the Biogas Flare once during each shift of operation that the biogas stream is venting to the flare. The flame presence shall be determined using either a thermal sensor or flame detector at the point of the flame.

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

D.1.8 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

(a) To document the compliance status with Condition D.1.6, the Permittee shall maintain a record of the bimonthly samples of biogas and the calculated H2S and SO2 emissions based on those samples.

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

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

D.1.9 Reporting Requirements [326 IAC 7-4.1-5(b)]

(a) A quarterly report of all H2S and SO_2 emissions from unit 800-04-E 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).

(b) A quarterly report of all SO_2 emissions from units 121-01-G, 89-01-G, 124A-01-G, 104-01-R, and 800-04-E, to document the compliance status with 326 IAC 7-4.1-5(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).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS - Alternate Carbohydrate Area

Emissions Unit Description [326 IAC 2-7-5(14)]: **II. Alternate Carbohydrate Area**

(c) Alternate Carbohydrate Mill Feed Hopper (Unit 127-30-B), installed in May 1993 and repurposed in 2008, with a maximum capacity of 0.836 tons per hour. Particulate emissions are controlled by dust collector (CE127-30-B) that exhausts to stack S127-30-B.

(d) No. 1 and No. 2 Alternate Carbohydrate Storage Bins (Unit ID 127-28-B and 127-29-B), installed in May 1993 and repurposed in 2008, each with a maximum throughput of 15 tons per hour. Carbohydrate is pneumatically conveyed to these hoppers equipped with bag filter dust collectors (CE127-28-B and CE127-29-B) that exhaust to stacks S127-28-B and S127-29-B.

(e) No. 1 and No. 2 Vacuum Cleaner Systems (Unit ID 127-21-B and 127-22-B), installed in May 1993, each with a maximum throughput of 0.3 tons per hour. These systems are for building dust. Particulate emissions are controlled by dust collectors that exhaust to stacks S127-21-B and S127-22-B.

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

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

D.2.1 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2 (Lake County: PM10 Emission Requirements), emissions of particulate matter less than ten microns in diameter (PM10) shall not exceed the emissions limits listed in the table below:

Unit ID	PM10 Limit (gr/dscf)	PM10 Limit (lbs/hr)
Alternate Carbohydrate Mill Feed Hopper (127-30-B)	0.01	0.028
No. 1 & No. 2 Alternate Carbohydrate Storage Bins (127-28-B) & (127-29-B)	0.01 each	0.18 each
Vacuum Cleaners #1 & #2 (127-21-B) & (127-22-B)	0.01 each	0.031 each

D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.2.3 Particulate Matter

(a) In order to assure compliance with Condition D.2.1, the bag filter dust collectors for PM10 control shall be in operation and control emissions from their associated facilities at all times that the facilities are in operation.

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

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

D.2.4 Parametric Monitoring (Dust Collectors)

The Permittee shall record the pressure drop across all baghouses or dust collectors used in conjunction with each Alternate Carbohydrate Area facility at least once per day when the associated facilities are in operation. When for any one reading, the pressure drop across the dust collector is outside of the normal range, the Permittee shall take reasonable response steps. The normal ranges for these units are the following unless a different upper-bound or lower bound values for these ranges are 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range ("H_2O)
Alternate Carbohydrate Mill Feed Hopper (127-30-B)	Dust Collector	0.1 - 6
No. 1 &No. 2 Alternate Carbohydrate Storage (127-28-B) & (127-29-B)	Dust Collector	0.1 – 6 each
Vacuum Cleaners #1 & #2 (127-21-B) & (127-22-B)	Dust Collector	0.1 – 6 each

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.2.5 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 emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

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

D.2.6 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

(a) To document the compliance status with Condition D.2.4, the Permittee shall maintain a daily record of the pressure drops across the baghouses controlling the processes. 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).

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

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS - Grind and Feedhouse Area

Emissions Unit Description: III. Grind and Feedhouse Area

(f) Gluten Dryer System equipped with an integral cyclone (Unit ID 121-01-G), installed in March 1995. Gluten meal is fed to a 12.5 MMBtu/hr natural and bio gas-fired ring dryer at a maximum throughput of 15,800 lb/hr. Particulate emissions are controlled by wet scrubber (CE121-01-G) that exhausts to stack S121-01-G.

(g) Fiber Drying Equipment (Unit ID 89-01-G), installed in October 1995. Wet fiber is fed to this 78 MMBtu/hr natural gas-fired dryer at a maximum throughput of 79,695 lb/hr. Particulate matter is controlled by a scrubber (CE89-01-G) that exhausts to stack S89-01-G.

(h) Germ Dryer/Cooler equipped with an integral cyclone (Unit ID 124A-01-G), installed in November 1994. Corn germ is fed to this 12.9 MMBtu/hr natural and bio gas-fired germ dryer and cooler at a maximum throughput of 16,580 lb/hr. Particulate emissions are controlled by one (1) scrubber (CE124A-01-G) that exhausts to stack S124A-01-G.

(i) Central Vacuum Loadout (Unit ID 200-07-G), installed in October 2000, with a maximum throughput of 100 lb/hr. Particulate emissions are controlled by a dust collector (CE200-07-G) that exhausts to stack S200-07-G.

(j) Germ Tank 1310 (Unit ID 200-01-G), installed in October 2000, with a maximum throughput of 80,000 lb/hr. Particulate emissions are controlled by a dust collector (CE200-01-G) that exhausts to stack S200-01-G.

(k) Gluten Tank 1410 (Unit ID 200-02-G), installed in October 2000, with a maximum throughput of 80,000 lb/hr. Particulate emissions are controlled by a dust collector (CE200-02-G) that exhausts to stack S200-02-G.

(l) Corn Screenings Silo (Unit ID 200-06-G), installed in October 2000 and approved in 2012 to increase airflow from 400 cubic feet per minute (cfm) to 1,200 cfm with a maximum throughput of 11,000 lb/hr. Particulate emissions are controlled by a dust collector (CE200-06-G) that exhausts to stack S200-06-G.

(m) Gluten Tank 1010 (Unit ID 200-04-G), installed in October 2000, with a maximum throughput of 21,000 lb/hr. Particulate emissions are controlled by a dust collector (CE200-04-G) that exhausts to stack S200-04-G.

(n) Germ Tank 1110 (Unit ID 200-03-G), installed in October 2000, with a maximum throughput of 30,000 lb/hr. Particulate emissions are controlled by a dust collector (CE200-03-G) that exhausts to stack S200-03-G.

(o) Bulk Loadout (Unit ID 200-05-G), installed in October 2000, with a maximum throughput of 95,900 lb/hr. Particulate emissions are controlled by a dust collector (CE200-05-G) that exhausts to stack S200-05-G.

(p) Corn Dump Pit (Unit ID 140-05-G), installed in December 1995, with a maximum throughput of 840 tons/hr. Particulate emissions are controlled by filter baghouse (CE140-05-G) that exhausts to stack S140-05-G.

(q) Corn Elevator Conveying (Unit ID 140-07-G), installed in December 1995, with a maximum

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS - Grind and Feedhouse Area

throughput of 140 tons/hr. Material is transferred from corn belt 1 to corn belt 2. Particulate emissions are controlled by a filter baghouse (CE140-07-G) that exhausts to stack S140-07-G.

(r) Corn Receiving and Storage, installed in December 1995. This system includes six Storage Bins, each with its own bin vent for control of particulate emissions, and each with a maximum throughput of 420 ton/hr:

(1) Bin #1: Unit ID 140-01-G
(2) Bin #2: Unit ID 140-02-G
(3) Bin #3: Unit ID 140-03-G
(4) Bin #4: Unit ID 140-04-G
(5) Bin #5: Unit ID 33-01-G
(6) Bin #6: Unit ID 33-02-G

(s) Gravity Take-up Conveyor (Corn Scale) (Unit ID 140-06-G), installed in December 1995, with a maximum throughput of 140 ton/hr. Corn is transferred from corn belt 2 to corn belt 3. Particulate emissions are controlled by baghouse (CE140-06-G) that exhausts to stack S140-06-G.

(t) Corn Cleaner (Unit ID 33-03-G), installed in December 1995, with a maximum throughput of 140 ton/hr. Corn passes through mechanical cleaners. Particulate emissions are controlled by a filter baghouse (CE33-03-G) that exhausts to stack S33-03-G.

(u) Three (3) Gluten Filters, installed in December 1995. Gluten slurry is applied to the surface of a filter drum where an internal vacuum on the drum removes moisture from the slurry. The Gluten is then removed from the drum by a roller. Exhaust from the removal process is collected by a hood and exhausted from the building.

(v) Three (3) Gluten Vacuum Pumps, installed in December 1995. The pumps create the vacuum used to remove moisture from the gluten slurry on the gluten filter. Exhaust from the pumps is vented from the building.

(w) Twenty-four (24) steep tanks (Unit ID Steephouse - Grind 1), consisting of 21 steep tanks installed prior to 1973 and 3 steep tanks installed in December 1995. The steep tanks contain a mildly acidic solution to soften the corn prior to milling. Tanks are individually vented and have only working/breathing losses.

(x) The following units, approved in 2016 for construction:

(1) Two (2) corn storage silos at the Corn Dump Pit and Receiving system, identified as 140-08-G and 140-09-G, each with a maximum throughput of 420 tons/hr, using baghouses CE-140-08-G and CE-140-09-G as control, and exhausting to stacks 140-08-G and 140-09-G, respectively.

(2) Two (2) bucket elevators at the Corn Dump Pit and Receiving System, identified as Bucket Elevators No. 2a and 2b, using baghouse CE140-05-G as control, exhausting to stack S140-05-G.

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

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

D.3.1 PM, PM10, and PM2.5 PSD Minor Limit [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the PM, PM10, and PM2.5 emissions from each of the corn silos 140-08-G and 140-09-G shall be limited as follows:

Unit	Unit ID	Control Device ID	PM Emission Limit (lb/hr)	PM10 Emission Limit (lb/hr)	PM2.5 Emission Limit (lb/hr)
Corn Silo	140-08-G	CE140-08-G	2.74	1.60	1.10
Corn Silo	140-09-G	CE140-09-G	2.74	1.60	1.10

Compliance with these emission limits, in combination with the potential to emit of PM, PM10 and PM2.5 of the emergency generator 93-41-S, will ensure that the potential to emit from this modification (SSM No. 089-36416-00203) is less than twenty-five (25) tons of PM per year, less than fifteen (15) tons of PM_{10} per year, and ten (10) tons of direct $PM_{2.5}$ per year, and therefore will render the requirements of 326 IAC 2-2 not applicable.

D.3.2 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2-8 (Lake County: PM10 Emission Requirements), emissions of particulate matter less than ten microns in diameter (PM10) shall not exceed the following:

Unit ID	PM10 Limit (gr/dscf)	PM10 Limit (lbs/hr)
Gluten Dryer System (121-01-G)	0.03	3.0
Fiber Drying Equipment (89-01-G)	0.01	4.5
Germ Dryer/Cooler (124A-01-G)	0.02	1.852
Corn Dump Pit (140-05-G)	0.01	1.286
Corn Elevator Conveying (140-07-G)	0.01	0.086
Corn Receiving and Storage Bins 1, 2, 3, & 4	0.02 each	0.343 each
Corn Receiving and Storage Day Tanks 5 & 6	0.02 each	0.171 each
Gravity Take-up Conveyor (140-06-G)	0.01	0.154
Corn Cleaner (33-03-G)	0.01	0.21

D.3.3 Particulate Matter Limitations for Lake County [326 IAC 6-1-2(h)]

Pursuant to 326 IAC 6-1-2(h) (Nonattainment Area Particulate Limitations), emissions of particulate matter from the following units shall not exceed the following limitations:

Unit ID	PM Limit (gr/dscf)	PM Limit (lbs/hr)
Central Vacuum Loadout (200-07-G)	0.005	0.02
Germ Tank 1310 (200-01-G)	0.005	0.05
Gluten Tank 1410 (200-02-G),	0.005	0.05
Corn Screenings Silo (200-06-G)	0.005	0.05
Gluten Tank 1010 (200-04-G)	0.005	0.05
Germ Tank 1110 (200-03-G)	0.005	0.05
Bulk Loadout (200-05-G)	0.005	1.21

D.3.4 Particulate Matter Limitations for Lake County [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County), emissions of particulate matter from the corn silos 140-08-G and 140-09-G shall not exceed 0.03 grains per dry standard cubic feet.

D.3.5 VOC Emissions [326 IAC 8-7] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

Pursuant to 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties):

Emissions of VOC from the following units shall not exceed the following limitations:

Unit Name	Unit ID	VOC Limit (lbs/hr)
Gluten Dryer System	121-01-G	3.72
Germ Dryer/Cooler	124A-01-G	3.97
Steephouse – Grind 1	Bldg 23	0.0039 [1]

1 – Units are lbs per bushel

D.3.6 Sulfur Dioxide Limitations for Lake County [326 IAC 7-4.1-5]

Pursuant to 326 IAC 7-4.1-5 (Sulfur Dioxide Limitations), emissions of sulfur dioxide from the following units shall not exceed the following limitations:

Unit Name	Unit ID	SO2 Limit (lbs/hr)
Gluten Dryer System	121-01-G	0.68
Fiber Drying Equipment	89-01-G	3.95
Germ Dryer/Cooler	124A-01-G	0.77

D.3.7 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.3.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.3.2, the Permittee shall perform PM-10 testing on the Gluten Ring Dryer (121-01-G), 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 includes filterable and condensible PM.

(b) In order to demonstrate compliance with Condition D.3.2, the Permittee shall perform PM10 testing for the Scrubber (CE89-01-G) controlling the Fiber Dryer (89-01-G), 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 includes filterable and condensible PM.

D.3.9 Particulate Matter

(a) In order to assure compliance with D.3.1, D.3.2, D.3.3, and D.3.4, the control devices for PM, PM10, and PM2.5 control shall be in operation and control emissions from their associated facilities at all times that the facilities are in operation.

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

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

D.3.10 Parametric Monitoring (Dust Collectors and Baghouses)

The Permittee shall record the pressure drop across each particulate control device used in the Grind and Feedhouse Area at least once per day when the associated system is in operation. When for any one reading, the pressure drop across the control device is outside of the normal range, the Permittee shall take reasonable response steps. The normal ranges for these units are the following unless a different upper-bound or lower bound values for these ranges are 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Central Vacuum Loadout (200-07-G)	Dust Collector	0.1 - 6
Germ Tank 1310 (200-01-G)	Dust Collector	0.1 - 6
Gluten Tank 1410 (200-02-G)	Dust Collector	0.1 - 6
Corn Screenings Silo (200-06-G)	Dust Collector	0.1 - 6
Gluten Tank 1010 (200-04-G)	Dust Collector	0.1 - 6
Germ Tank 1110 (200-03-G)	Dust Collector	0.1 - 6
Corn Elevator Conveying (140-07-G)	Dust Collector	0.1 - 6
Gravity Take-up Conveyor (140-06-G)	Dust Collector	0.1 - 6
Corn Silo (140-08-G)	Baghouse	0.1 - 6
Corn Silo (140-09-G)	Baghouse	0.1 - 6
Corn Cleaner (33-03-G)	Dust Collector	0.1 - 6

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.3.11 Parametric Monitoring (Dust Collectors) [40 CFR 64]

The Permittee shall record the pressure drop across each particulate control device used in the Grind and Feedhouse Area at least once per day when the associated system is in operation. When for any one reading, the pressure drop across the control device is outside of the normal range, the Permittee shall take reasonable response steps. The normal ranges for these units are the following unless a different upper-bound or lower bound values for these ranges are 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Bulk Loadout (200-05-G)	Dust Collector	0.1 - 6
Corn Dump Pit (140-05-G)	Dust Collector	0.1 - 6

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.3.12 Parametric Monitoring (Scrubbers)

The Permittee shall record the pressure drop across the scrubber used in the Grind and Feedhouse Area below, at least once per day when the associated system is in operation. When for any one reading, the pressure drop across a scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is as listed in table below 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 following range or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Fiber Drying Equipment (89-01-G)	Scrubber	0.1 - 6

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

D.3.13 Parametric Monitoring (Scrubbers) [40 CFR 64]

The Permittee shall record the pressure drop across each scrubber below used in the Grind and Feedhouse Area, at least once per day when the associated system is in operation. When for any one reading, the pressure drop across a scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is as listed in table below 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Gluten Ring Dryer System (121-01-G)	Wet Scrubber	12 -19
Germ Dryer/Cooler (124A-01-G)	Scrubber	10-19

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

D.3.14 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 emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

D.3.15 Scrubber Failure Detection

In the event that a scrubber's failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have 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). Failure to take response steps shall be considered a deviation from this permit.

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

D.3.16 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

(a) To document the compliance status with Conditions D.3.10, D.3.11, D.3.12, and D.3.13 the Permittee shall maintain a daily record of the pressure drop readings. 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).

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

D.3.17 Reporting Requirements [326 IAC 7-4.1-5(b)]

A quarterly report of all SO_2 emissions from units 121-01-G, 89-01-G, 124A-01-G, 104-01-R, and 800-04-E, to document the compliance status with 326 IAC 7-4.1-5(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).

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS - Utility Area

Emissions Unit Description: **IV. Utility Area**

The Utility area includes the following boiler used to supply steam for plant processes.

(y) Natural gas-fired Package Boiler #1 (Unit ID 89-03-U), installed in 2006, with a maximum heat input capacity of 247 million Btu/hr, and exhausting to stack S89-03-U. Under NSPS 40 CFR 60 Subpart Db, Package Boiler #1 is a steam-generating unit with a heat input capacity greater than 100 million Btu/hr. Under NESHAP 40 CFR 63, Subpart DDDDD, this boiler is an existing affected unit.

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

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

D.4.1 Particulate Matter Limitations for Lake County [326 IAC 6.8]

Pursuant to 326 IAC 6.8-1-2(b)(3), Package Boiler #1 shall burn natural gas only and particulate matter emissions shall not exceed 0.01 grains per dry standard cubic foot (dscf).

D.4.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS - Refinery Area

Emissions Unit Description: **V. Refinery Area**

(z) Corn Syrup Spray Dryer #4 (Unit ID 100-03-R), installed in April 1992. Corn syrup is fed to a dryer at a maximum throughput of 4.8 ton/hr. The solids are sent through cyclones to a packing area. Particulate emissions are controlled by a wet scrubber (CE100-03-R) that exhausts to stack S100-03-R.

(aa) Corn Syrup Spray Dryer/Cooler System #3 (Unit ID 100-01-R), installed in July 1987. Corn syrup is fed to a dryer at a maximum rate of 4.8 ton/hr. The solids are sent through cyclones to a packing area. Particulate emissions are controlled by a wet venturi scrubber (CE100-01-R) that exhausts through stack S100-01-R.

(bb) Activated Carbon Regeneration Furnace #2 (Unit ID 104-01-R), installed in July 1995. Spent carbon is regenerated in this 13.2 MMBtu/hr natural gas-fired furnace at a maximum throughput of 1.146 ton/hr. Emissions are controlled by a venturi scrubber and an impingement furnace scrubber (CE104-01-R) that exhaust through stack S104-01-R.

(cc) Liquid Soda Ash Tank (Unit ID 104-02-R), installed in July 1995, with a maximum throughput of 15 ton/hr. Particulate emissions from loading this tank are controlled by a venturi scrubber (CE104-02-R) that exhausts to stack S104-02-R.

(dd) Filter Aid Hopper (Unit ID 104-03-R), installed in July 1995, with a maximum throughput of 0.75 ton/hr. This hopper is equipped with a jet pulse baghouse (CE104-03-R) that exhausts to stack S104-03-R.

(ee) Sodium Bisulfite Bag Dump (Unit ID 104-05-R), installed in July 1995, with a maximum throughput of 0.7 ton/hr. This unit is controlled by a jet pulse baghouse (CE104-05-R) that exhausts to stack S104-05-R.

(ff) Diatomaceous Earth Unloading (Unit ID 104-08-R), installed in November 1998**,** with a maximum throughput of 1.75 ton/hr. Diatomaceous earth (filter aid) is unloaded from railcar to silo. Particulate emissions are controlled by a Bin Vent Filter (DC2312) that exhausts to stack S104-08-R.

(gg) Citric Acid Dump Station (Unit ID 104-09-R), installed in November 1998, with a maximum throughput of 30 lb/hr. Citric Acid is added during the production of corn syrup. Particulate emissions are controlled by a built-in dust collector (CE104-09-R) that exhausts to stack S104-09-R.

(hh) Refinery Vacuum Pumps (1-3) (Unit IDs RVF 1-1, RVF 1-2, and RVF 1-3 Precoating Vacuum Pump), installed in July 1995. The pumps create the vacuum used to pull liquid corn syrup through a filtering media. Exhaust from the pumps is vented from the building.

(ii) Refinery Vacuum Pumps (4-6) (Unit IDs RVF 3-1, RVF 3-2, and RVF 3-3 Precoating Vacuum Pump), installed in November 1999. The pumps create the vacuum used to pull liquid corn syrup through a filtering media. Exhaust from the pumps is vented from the building.

(jj) Refinery Vacuum Pumps (7-8) (Unit IDs RVF 2-1 and RVF 2-2), installed in July 1995. The pumps create the vacuum used to pull liquid corn syrup through a filtering media. Exhaust from the pumps is vented from the building.

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS - Refinery Area

(kk) Two (2) HCL tanks (Unit ID HCL Tank – Refinery), installed in July 1995 and December 2002. Tanks store HCl used in the corn syrup manufacturing process. The tanks vent to an acid fume scrubber.

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

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

D.5.1 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2-8 (Lake County: PM10 Emission Requirements), emissions of particulate matter less than ten microns in diameter (PM10) shall be limited to the following:

Unit ID	PM10 Limit (gr/dscf)	PM10 Limit (lbs/hr)
Corn Syrup Spray Dryer #4 (100-03-R)	0.01	4.2
Corn Syrup Spray Dryer/Cooler System #3 (100-01-R)	0.015	4.96
Activated Carbon Regeneration Furnace #2 (104-01-R)	0.015	0.728
Liquid Soda Ash Tank (104-02-R)	0.02	0.154
Filter Aid Hopper (104-03-R)	0.02	0.044
Sodium Bisulfite Bag Dump (104-05-R)	0.02	0.080

D.5.2 Particulate Matter Limitations for Lake County [326 IAC 6-1-2(h)]

Pursuant to CP 089-1230-00203, issued November 1998, and 326 IAC 6-1-2(h) (Nonattainment Area Particulate Limitations), emissions of particulate matter shall be limited to the following:

Unit ID	PM Limit (gr/dscf)	PM Limit (lbs/hr)
Diatomaceous Earth Unloading Silo (104-08-R)	0.01	0.064
Citric Acid Dump Station (104-09-R)	0.01	0.026

D.5.3 VOC Emissions [326 IAC 8-7] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

Pursuant to 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties):

Emissions of VOC from the following units shall not exceed the following limitations:

Unit Name	Unit ID	VOC Limit (lbs/hr)
Corn Syrup Spray Dryer/Cooler System #3	100-01-R	0.50
Corn Syrup Spray Dryer #4	100-03-R	0.86

D.5.4 Lake County Sulfur Dioxide Emission Limitations [326 IAC 7-4.1-5]

Pursuant to 326 IAC 7-4.1-5 (Lake County Sulfur Dioxide Emission Limitations), emissions of sulfur dioxide from the Activated Carbon Regeneration Furnace #2 (Unit ID 104-01-R) shall not exceed 0.11 pounds per hour.

D.5.5 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.5.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.5.1, the Permittee shall perform PM-10 testing of the Corn Syrup Spray Dryer #4 (100-03-R) and the Corn Syrup Spray Dryer/Cooler System #3 (100-01-R) 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 includes filterable and condensible PM.

D.5.7 Particulate Matter

(a) In order to assure compliance with Conditions D.5.1 and D.5.2, the control devices for PM and PM10 control shall be in operation and control emissions from each facility at all times that the facility is in operation.

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

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

D.5.8 Parametric Monitoring (Dust Collectors)

The Permittee shall record the pressure drop across the control device used in conjunction with each Refinery Area facility as listed below, at least once per day, when the associated facility is in operation. When for any one reading, the pressure drop across the control device is outside of the normal range, the Permittee shall take reasonable response steps. The normal ranges for these units are the following unless a different upper-bound or lower bound values for these ranges are 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Filter Aid Hopper (104-03-R)	Dust Collector	0.1 - 6
Sodium Bisulfite Bag Dump (104-05-R)	Dust Collector	0.1 - 6
Diatomaceous Earth Unloading Silo (104-08-R)	Bin Vent Filter	0.1 - 6
Citric Acid Dump Station (Unit ID 104-09-R).	Dust Collector	0.1 - 6

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.5.9 Parametric Monitoring (Scrubbers)

The Permittee shall record the pressure drop across each scrubber used in the Refinery Area, at least once per day when the associated system is in operation. When for any one reading, the pressure drop across a scrubber is outside the following range 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 following range or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Liquid Soda Ash Tank (104-02-R)	Wet Scrubber	0.25 – 10.0

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

D.5.10 Parametric Monitoring (Scrubbers) [40 CFR 64]

The Permittee shall record the pressure drop across each scrubber used in the Refinery Area, at least once per day when the associated system is in operation. When for any one reading, the pressure drop across a scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is as listed in table below 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 following range or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Corn Syrup Spray Dryer #4 (100-03-R)	Wet Scrubber	1.0 – 8.0
Corn Syrup Spray Dryer/Cooler System #3 (100-01-R)	Wet Scrubber	0.1 – 6.0
Activated Carbon Regeneration Furnace #2 (104-01-R)	Wet Scrubber	0.1 - 8.0

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

D.5.11 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 emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

D.5.12 Scrubber Failure Detection

In the event that a scrubber's failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have 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). Failure to take response steps shall be considered a deviation from this permit.

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

D.5.13 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

(a) To document the compliance status with Conditions D.5.8, D.5.9, and D.5.10, the Permittee shall maintain a daily record of the pressure drop readings. 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).

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

D.5.14 Reporting Requirements [326 IAC 7-4.1-5(b)]

A quarterly report of all SO_2 emissions from units' 121-01-G, 89-01-G, 124A-01-G, 104-01-R, and 800-04-E, to document the compliance status with 326 IAC 7-4.1-5(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).

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS - Starch Production Area

Emissions Unit Description: **VI. Starch Production Area**

(ll) Batch Scale Hopper #1 (Unit ID 34-01-S), installed in January 1991, with a maximum throughput of 24 ton/hr. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34-01-S) that exhausts to stack S34-01-S.

(mm) Dextrin Starch Reactor #1 (Unit ID 34-02-S), installed in January 1991, with a maximum throughput of 6 ton/hr. Dried cornstarch is fed to a reactor heated by steam from the plant boiler. Particulate emissions are controlled by a bag filter dust collector (CE34-02-S) that exhausts to stack S34-02-S.

(nn) Dextrin Starch Cooler #1 (Unit ID 34-03-S), installed in January 1991, with a maximum throughput of 6 ton/hr. Roasted corn starch is fed to a cooler and transferred to a hopper for storage. Particulate emissions are controlled by a bag filter dust collector (CE34-03-S) that exhausts to stack S34-03-S.

(oo) Surge Hopper #1 (Unit ID 34-05-S), installed in January 1991, with a maximum throughput of 6 ton/hr. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34-05-S) that exhausts to stack S34-05-S.

(pp) Batch Scale Hopper #2 (Unit ID 34B-13-S), installed in October 1993, with a maximum throughput of 24 ton/hr. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34B-13-S) that exhausts to stack S34B-13-S.

(qq) Dextrin Starch Reactor #2 (Unit ID 34B-04-S), installed in October 1993, with a maximum throughput of 6 ton/hr. Dried cornstarch is fed to a reactor heated by steam from the plant boiler. Particulate emissions are controlled by a bag filter dust collector (CE34B-04-S) that exhausts to stack S34B-04-S.

(rr) Dextrin Starch Cooler #2 (Unit ID 34B-01-S), installed in October 1993, with a maximum throughput of 6 ton/hr. Roasted cornstarch is fed to a cooler and transferred to a hopper for storage. Particulate emissions are controlled by dust collector (CE34B-01-S) that exhausts to stack S34B-01-S.

(ss) Surge Hopper #2 (Unit ID 34B-03-S), installed in October 1993, with a maximum throughput of 6 ton/hr. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34B-03-S) that exhausts to stack S34B-03-S.

(yy) Dextrin Feed Hoppers #3 and #4 (System #2) (Unit IDs 34B-05-S and 34B-06-S), installed in October 1993, each with a maximum throughput of 6 ton/hr. Starch is gravity conveyed to these hoppers. Particulate emissions are controlled by bag filter dust collectors (CE34B-05-S and CE34B-06-S) that exhaust to stacks S34B-05-S and S34B-06-S.

(uu) Dextrin Bulk Loading Equipment (Unit ID 48-09-S), installed before 1977, with a maximum throughput of 30 ton/hr. Starch is pneumatically conveyed to this hopper. Particulate emissions are controlled by a bag filter dust collector (CE48-09-S) that exhausts to stack S48-09-S.

(vv) Starch Ring Dryer #2 (Unit ID 59-03-S), installed in November 1993. Starch is fed to this 25 MMBtu/hr natural gas-fired ring dryer at a maximum throughput of 13.5 ton/hr. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by a wet scrubber (CE59-03-S) that exhausts to stack S59-03-S.

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS - Starch Production Area

(ww) Starch Ring Dryer #3 (Unit ID 125-01-S), installed in May 1980. Cornstarch is fed to this 62 MMBtu/hr natural gas-fired ring dryer at a maximum throughput of 26.55 ton/hr. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by a wet scrubber (CE125-01-S) that exhausts to stack S125-01-S.

(xx) Special Starch Process with Starch Ring Dryer #4 (Unit ID 128-01-S), installed in December 1993. Corn starch is fed to this 30 MMBtu/hr natural gas-fired dryer at a maximum throughput of 12.5 ton/hr. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by wet scrubber (CE128-01-S) that exhausts to stack S128-01-S.

(yy) Reactors #2 through #8 (Unit IDs 128-07-S through 128-13-S), installed in November 1988 (2-4) and December 1991 (5-8), each can process up to 40 tons of starch. Cornstarch and propylene oxide are reacted through Reactors 2, 3, 4, and 7 only. When propylene oxide is used, each reactor can use up to 5 tons of propylene oxide per batch. When propylene oxide is used in the starch reaction, VOC emissions are controlled by a thermal oxidizer S128-14-S that exhausts to stack S128-14-S.

(zz) Sodium Sulfate Storage Bin (Unit ID 128-25-S), installed in October 2000, with a maximum throughput of 1.1 ton/hr. Particulate emissions are controlled by a bin vent dust collector (FA1900), that exhausts to stack S128-25-S.

(aaa) Sodium Sulfate Weigh Bin (Unit ID 128-26-S), installed in October 2000, with a maximum throughput of 1.1 ton/hr. Particulate emissions are controlled by a bin vent dust collector (FA1950), that exhausts to stack S128-26-S.

(bbb) Cornstarch Storage Bins #20 through #36 (Unit IDs 120-01-S through 120-17-S), installed in July 1990 and approved in 2011 for modification to increase airflow into Cornstarch Storage Bin No. 23 (ID 120-04-S) to allow for the milled starch from the Nos. 1 and 2 Starch Milling Systems to directly convey starch to Cornstarch Storage Bin No. 23 (ID 120-04-S), each with a maximum throughput of 75 ton/hr. Cornstarch is pneumatically conveyed to these storage bins. Particulate emissions are controlled by bag filter dust collectors that exhaust to stacks S120-01-S through S120-17-S.

(ccc) Waxy Cornstarch Bulk Storage Bins #95 through #98 (Unit IDs 126-01-S through 126-04-S), replaced in January 1996, each with a maximum throughput of 20.5 ton/hr. Waxy cornstarch is conveyed to these bins. Particulate emissions are controlled by dust collectors (CE126-01-S through CE126-04-S) that exhaust to stacks S126-01-S through S126-04-S.

(ddd) Cornstarch Blending Systems #1 through #4 (Unit IDs 130-01-S through 130-04-S), installed in April 1988, each with a maximum throughput of 30 ton/hr. Cornstarch is blended and moved to the warehouse for packing. Particulate emissions are controlled by bag filter dust collectors (CE130-01-S through 130-04-S) that exhaust to stacks S130-01-S through S130-04-S.

(eee) Dextrin Blender (Unit ID 130-05-S), installed in October 1993, with a maximum throughput of 30 ton/hr. Cornstarch is blended and moved to the warehouse for packing. Particulate emissions are controlled by a bag filter dust collector (CE130-05-S) that exhausts to stack S130-05-S.

(fff) One (1) propylene oxide tank, approved in 2015 for construction, identified as 93-18-S, with a maximum capacity of 28,000 gallons, equipped with a thermal oxidizer (CE93-41-S). This tank also provides propylene oxide to other starch processes.

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS - Starch Production Area

(fff1) One (1) 28,000 gallon horizontal propylene oxide tank (Unit ID 93-18-S), installed in 1988, with 95% efficient vapor recovery (liquid nitrogen condenser). This tank also provides propylene oxide to other starch processes.

(ggg) Bldg 128 Tank Farm A, approved in 2015 for construction. Tanks include HCl, hydrogen peroxide, sodium hypochlorite and sodium Bisulfate storage tanks. The tanks vent to an acid fume scrubber.

(ggg1) Bldg 128 Tank Farm, installed in November 1999. Tanks include HCl, Acetic Anhydride, Sodium Bisulfate storage tanks, and the Acetic/Adipic mix tank.

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

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

D.6.1 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2 (Lake County: PM10 Emission Requirements) emissions of particulate matter less than ten microns in diameter (PM10) shall be limited to the following.

Unit ID	PM10 Limit (gr/dscf)	PM10 Limit (lbs/hr)
Batch Scale Hopper #1 (34-01-S)	0.01	0.04
Dextrin Starch Reactor #1 (34-02-S)	0.01	0.180
Dextrin Starch Cooler #1 (34-03-S)	0.01	0.042
Surge Hopper #1 (34-05-S)	0.01	0.11
Batch Scale Hopper #2 (34B-13-S)	0.01	0.067
Dextrin Starch Reactor #2 (34B-04-S)	0.01	0.179
Dextrin Starch Cooler #2 (34B-01-S)	0.01	0.042
Surge Hopper #2 (34B-03-S)	0.01	0.114
Dextrin Feed Hoppers #3 and #4 (34B-05-S & 34B-06-S)	0.01 each	0.030 each
Dextrin Bulk Loading Equipment (48-09-S)	0.01	0.26
Starch Ring Dryer #2 (59-03-S)	0.006	3.50
Starch Ring Dryer #3 (125-01-S)	0.006	3.50
Special Starch Process / Starch Ring Dryer #4 (128-01-S)	0.01	3.5
Cornstarch Storage Bins 20, 21, 22, 24-36 (120-01-S, 120-02-S, 120-03-S to 120-17-S), Corn starch Storage Bin 23, controlled by dust collector (120-04-S), only 5 total bins may operate at one time	0.01 each	0.56 each
Waxy Cornstarch Storage Bins 95-98 (126-01-S to 126-04-S) only 1 may operate at a time	0.01 each	0.16 each
Cornstarch Blending Systems 1-4 (130-01-S to 130-04-S)	0.01	0.42
Dextrin Blender (130-05-S)	0.01	0.248

D.6.2 Particulate Matter Limitation for Lake County [326 IAC 6.8-1-2(h)]

Pursuant to 326 IAC 6.8-1-2(h) (Non-attainment Area Particulate Limitations), emissions of particulate matter shall be limited to the following.

Unit ID	PM Limit (gr/dscf)	PM Limit (lbs/hr)
Sodium Sulfate Storage Bin (128-25-S)	0.005	0.03
Sodium Sulfate Weigh Bin (128-26-S)	0.005	0.03

D.6.3 VOC Emissions [326 IAC 8-7] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

Pursuant to 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties):

Emissions of VOC from the following units shall not exceed the following limitations:

Unit Name	Unit ID	VOC Limit (lbs/hr)
Cornstarch Storage Bin 20	120-01-S	0.05
Cornstarch Storage Bin 21	120-02-S	0.05
Cornstarch Storage Bin 22	120-03-S	0.05
Cornstarch Storage Bin 23	120-04-S	0.05
Cornstarch Storage Bin 24	120-05-S	0.05
Cornstarch Storage Bin 25	120-06-S	0.05
Cornstarch Storage Bin 26	120-07-S	0.05
Cornstarch Storage Bin 27	120-08-S	0.05
Cornstarch Storage Bin 28	120-09-S	0.05
Cornstarch Storage Bin 29	120-10-S	0.05
Cornstarch Storage Bin 30	120-11-S	0.05
Cornstarch Storage Bin 31	120-12-S	0.05
Cornstarch Storage Bin 32	120-13-S	0.05
Cornstarch Storage Bin 33	120-14-S	0.05
Cornstarch Storage Bin 34	120-15-S	0.05
Cornstarch Storage Bin 35	120-16-S	0.05
Cornstarch Storage Bin 36	120-17-S	0.05
Starch Ring Dryer #3	125-01-S	0.86
Starch Ring Dryer #4	128-01-S	0.90
Starch Reactors	128-07-S thru 128-09-S and 128-12-S	0.06
Cornstarch Blending System 1	130-01-S	0.04
Cornstarch Blending System 2	130-02-S	0.04
Cornstarch Blending System 3	130-03-S	0.04
Cornstarch Blending System 4	130-04-S	0.04
Dextrin Blender	130-05-S	0.09
Batch Scale Hopper #1	34-01-S	0.07
Dextrin Starch Reactor #1	34-02-S	0.27
Dextrin Starch Cooler #1	34-03-S	0.06
Surge Hopper #1	34-05-S	0.17
Dextrin Starch Cooler #2	34B-01-S	0.06
Surge Hopper #2	34B-03-S	0.17
Dextrin Starch Reactor #2	34B-04-S	0.27
Dextrin Feed Hopper #3	34B-05-S	0.02
Dextrin Feed Hopper #4	34B-06-S	0.02
Batch Scale Hopper #2	34B-13-S	0.10
Dextrin Bulk Loading	48-09-S	0.39
Starch Ring Dryer #2	59-03-S	1.19

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

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

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

D.6.5 Testing Requirements (PM10) [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.6.1, the Permittee shall perform PM-10 testing of the Starch Ring Dryer #2 (59-03-S), Starch Ring Dryer #3 (125-01-S), and the Special Starch Process w/ Starch Ring Dryer #4 (128-01-S) 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 includes filterable and condensible PM.

(b) In order to demonstrate compliance with Condition D.6.1 and Condition 6.3, the Permittee shall perform PM10 and VOC testing for the Corn starch Storage Bin 23 dust collector (120-04-S), 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 includes filterable and condensible PM.

D.6.6 Volatile Organic Compounds (VOC) [326 IAC 2-3] [326 IAC 8-7-9] [326 IAC 8-7-10]

(a) The thermal oxidizer for VOC control for Reactors 2, 3, 4 and 7 shall be installed, calibrated, maintained, and operated, at a minimum, according to the manufacturer's specifications and recommendations.

(b) In order to assure compliance with Condition D.6.3(a), the thermal oxidizer (S128-14-S) shall be in operation and control emissions from Reactors 2, 3, 4, and/or 7 (128-07-S through 128-09-S and 128-12-S) at all times propylene oxide is being added to special starch Reactors 2, 3, 4, and/or 7 (128-07-S through 128-09-S and 128-12-S).

D.6.7 Particulate Matter

(a) In order to assure compliance with Conditions D.6.1 and D.6.2, the control devices for PM and PM10 control shall be in operation and control emissions from each facility at all times that the facility is in operation.

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

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

D.6.8 Parametric Monitoring (Dust Collectors)

The Permittee shall record the pressure drop across each control device used in the Starch Production Area at least once per day when the associated facility is in operation. When for any one reading, the pressure drop across the control device is outside of the normal ranges, the

Permittee shall take reasonable response steps. The normal ranges for these units are the following unless a different upper-bound or lower bound values for these ranges are 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Batch Scale Hopper #1 (34-01-S)	Dust Collector	0.1 - 6
Dextrin Starch Reactor #1 (34-02-S)	Dust Collector	0.1 - 6
Dextrin Starch Cooler #1 (34-03-S)	Dust Collector	0.1 - 6
Surge Hopper #1 (34-05-S)	Dust Collector	0.1 - 6
Batch Scale Hopper #2 (34B-13-S)	Dust Collector	0.1 - 6
Dextrin Starch Reactor #2 (34B-04-S)	Dust Collector	0.1 - 6
Dextrin Starch Cooler #2 (34B-01-S)	Dust Collector	0.1 - 6
Surge Hopper #2 (34B-03-S),	Dust Collector	0.1 - 6
Dextrin Feed Hoppers #3 and #4 (34B-05-S & 34B-06-S)	Dust Collector	0.1 – 6 each
Sodium Sulfate Storage Bin (128-25-S)	Dust Collector	0.1 - 6
Sodium Sulfate Weigh Bin (128-26-S)	Dust Collector	0.1 - 6
Waxy Cornstarch Storage Bins 95-98 (126-01-S to 126-04-S)	Dust Collectors	0.1 - 6 each

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.6.9 Parametric Monitoring (Dust Collectors) [40 CFR 64]

The Permittee shall record the pressure drop across each control device used in the Starch Production Area at least once per day when the associated facility is in operation. When for any one reading, the pressure drop across the control device is outside of the normal range, the Permittee shall take reasonable response steps. The normal ranges for these units are the following unless a different upper-bound or lower bound values for these ranges are determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response required by this condition. A pressure reading that is outside the following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take a reasonable response shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Dextrin Bulk Loading Equipment (48-09-S)	Dust Collector	0.1 - 6
Cornstarch Storage Bins 20, 21, 22, 24-36 (120-01-S, 120-02-S, 120-03-S to 120-17-S), Corn starch Storage Bin 23, controlled by dust collector (120-04-S)	Dust Collectors	0.1 - 6 each
Cornstarch Blending Systems 1-4 (130-01-S to130-04-S)	Dust Collectors	0.1 - 6 each

Dextrin Blender (130-05-S)	Dust Collector	0.1 - 6

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.6.10 Parametric Monitoring (Scrubbers) [40 CFR 64]

The Permittee shall record the pressure drop across each scrubber used in the Starch Production Area, at least once per day when the associated system is in operation. When for any one reading, the pressure drop across a scrubber is outside the following ranges 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Starch Ring Dryer #2 (59-03-S)	Wet Scrubber	1.0 – 11.0
Starch Ring Dryer #3 (125-01-S)	Wet Scrubber	5 - 17
Special Starch Process / Starch Ring Dryer #4 (128-01-S)	Wet Scrubber	0.1 - 10

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

D.6.11 Parametric Monitoring (Thermal Oxidizer) [326 IAC 2-3] [326 IAC 8-7-9] [326 IAC 8-7-10] [40 CFR 64]

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

(b) The flow of propylene oxide shall be automatically interrupted when that temperature falls below the temperature established during the most recent compliant stack test.

(c) 100% of the vapors, when using propylene oxide in starch Reactors 2, 3, 4, and/or 7, shall be captured and shall pass through the Thermal Oxidizer.

(d) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with limits in Condition D.6.3(a).

(e) 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, until more recent compliant stack test results are available, when using propylene oxide in starch reactors 2, 3, 4 and/or 7.

(f) A temperature reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.6.12 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(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 emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

D.6.13 Scrubber Failure Detection

In the event that a scrubber's failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have 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). Failure to take response steps shall be considered a deviation from this permit.

D.6.14 Parametric Monitoring

(a) The Permittee shall determine the appropriate duct pressure from the most recent valid stack test that demonstrates compliance with limits in Condition D.6.3(a).

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

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

D.6.15 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

(a) To document the compliance status with Conditions D.6.8, D.6.9, and D.6.10, the Permittee shall maintain a daily record of the pressure drop readings. 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).

(b) To document the compliance status with Condition D.6.11, the Permittee shall maintain a daily record of the thermal oxidizer temperature. The Permittee shall include in its daily record when a thermal oxidizer temperature reading is not taken and the reason for the lack of thermal oxidizer temperature reading (e.g. the process did not operate that day).

(c) To document the compliance status with Condition D.6.14, the Permittee shall maintain daily records of the duct pressure used to demonstrate compliance during the most recent compliant stack test. The Permittee shall include in its daily record when a duct pressure record is not taken and the reason for the lack of duct pressure record (e.g., the

process did not operate that day).

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

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS - Starch Warehouse Area

Emissions Unit Description: **VII. Starch Warehouse Area**

(hhh) Channel 2 Receiver (Unit ID 93-32-W), installed in September 2000, with a maximum throughput of 15 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-32-W.

(iii) Channel 3 Receiver (Unit ID 93-33-W), installed in September 2000, with a maximum throughput of 25 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-33-W.

(jjj) Channel 4 Receiver (Unit ID 93-34-W), installed in September 2000, with a maximum throughput of 15 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-34-W.

(kkk) Channel 6 Receiver (Unit ID 93-35-W), installed in September 2000, with a maximum throughput of 4.5 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-35-W.

(lll) Channel 4/6 Packing (Unit ID 93-37-W), installed in September 2000, with a maximum throughput of 40 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-37-W.

(mmm) Channel 2/3 Packing (Unit ID 93-36-W), installed in September 2000, with a maximum throughput of 40 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-36-W.

(nnn) Central Vacuum System (Unit ID 93-38-W), installed in October 2000, with a maximum throughput of 100 lb/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-38-W.

(ooo) Dried Corn Syrup Conveying System (Unit ID 93-04-W), installed in July 1976, with a maximum throughput of 15 ton/hr. Particulate emissions are controlled by a baghouse (CE93-04-W) that exhausts to stack S93-04-W.

(ppp) Corn Syrup Solids Conveying System (Unit ID 93-05-W), installed in July 1976, with a maximum throughput of 10 ton/hr. Particulate emissions are controlled by a baghouse (CE93-05-W) that exhausts to stack S93-05-W.

(qqq) Frodex Semi-bulk Packing System (Unit ID 93-08-W), installed in September 1989, with a maximum throughput of 10 ton/hr. Particulate emissions are controlled by a baghouse (CE93-08-W) that exhausts to stack S93-08-W.

(rrr) Cornstarch Bag Dumping Stations #1 and #2 (Unit IDs 93-09-W and 93-10-W), installed in April 1988, each with a maximum throughput of 1.2 ton/hr. Particulate emissions are controlled by bag filter dust collectors (CE93-09-W and CE93-10-W) that exhaust to stacks S93-09-W and S93-10-W.

(sss) Starch Bulk Loading (Unit ID 93-14-W), installed in April 1995, with a maximum throughput of 30 ton/hr. Particulate emissions are controlled by a baghouse (CE93-14-W) that exhausts to stack S93-14-W.

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS - Starch Warehouse Area

(ttt) Starch Bulk Loading Vacuum Cleanup System (Unit ID 93-15-W), installed in February 1994, with a maximum throughput of 1 ton/hr. Cleanup for cornstarch spills. Particulate emissions are controlled by bag filter dust collector (CE93-15-W) that exhausts to stack S93-15-W.

(uuu) Starch Mixing and Bulk Bagging Systems #1 and #2 (Unit IDs 93-16-W and 93-17-W), installed in August 1995, each with a maximum throughput of 25 ton/hr and 12.5 ton/hr, respectively. Particulate emissions are controlled by baghouses (CE93-16-W and CE93-17-W) that exhaust to stacks S93-16-W and S93-17-W.

(vvv) P.G. Starch Receiver (Unit ID 93-18-W), installed in September 1999, with a maximum throughput of 3 ton/hr. Starch is received from P.G. starch roll dryers for packaging. Particulate emissions are controlled by a dust collector (CE93-18-W) that exhausts to stack S93-18-W.

(www) P.G. Starch Packing (Unit ID 93-39-W), installed in January 2000, with a maximum throughput of 3 ton/hr. Particulate emissions are controlled by a dust collector (CE93-39-W) that exhausts to stack S93-39-W.

(xxx) Corn Syrup Solids Manufacturing System #5, approved in 2010 for construction, identified as Unit ID 93-40-W, with a maximum capacity of 6,000 lbs/hr (dry basis), using dust collector (CE93-40-W) as control, and exhausting to stack S93-40-W.

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

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

D.7.1 PSD and Emission Offset Minor Limits [326 IAC 2-2][326 IAC 2-3]

In order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable, the PM10 and PM2.5 emissions from stack S93-40-W shall be less than the emission limits listed in the table below:

Equipment Description	Stack ID	PM10 Emission Limit (lb/hr)	PM2.5 Emission Limit (lb/hr)
Corn Syrup Solids Manufacturing System #5	stack S93-40-W	3.31	2.17

Compliance with the above limits, shall limit the PM emissions from stack S93-40-W to less than twenty-five (25) tons per twelve (12) consecutive month period and the PM_{10} emissions from stack S93-40-W to less than fifteen (15) tons per twelve (12) consecutive month period and the PM2.5 emissions from stack S93-40-W to less than ten (10) tons per twelve (12) consecutive month period. Compliance with the above limits renders the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.7.2 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6.8-1-2(a)]

Pursuant to 326 IAC 6.8-1-2(a), particulate matter (PM) emissions from the Corn Syrup Solids Manufacturing System #5 (Unit ID 93-40-W) shall not exceed three-hundredths (0.03) grain per dry standard cubic foot (dscf).

D.7.3 Particulate Matter Limitations for Lake County [326 IAC 6-1-2(h)]

Pursuant to 326 IAC 6-1-2(h) (Non-attainment Area Particulate Limitations), emissions of particulate matter from the following units shall be limited to the following:

Unit ID	PM Limit (gr/dscf)	PM Limit (lbs/hr)
Channel 2 Receiver (93-32-W)	0.005	0.10
Channel 3 Receiver (93-33-W)	0.005	0.10
Channel 4 Receiver (93-34-W)	0.005	0.10
Channel 6 Receiver (Dextrin) (93-35-W)	0.005	0.10
Channel 4/6 Packing (Dextrin)(93-37-W)	0.005	0.51
Channel 2/3 Packing (93-36-W)	0.005	0.51
Central Vacuum System (93-38-W)	0.005	0.02
P.G. Starch Receiver (93-18-W)	0.01	0.343
P.G. Starch Packing (Unit ID 93-39-W)	0.01	0.13

D.7.4 Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2 (Lake County PM10 Emission Requirements), emissions of particulate matter less than ten microns in diameter (PM10) from the following units shall be limited to the following:

Unit ID	PM10 Limit (gr/dscf)	PM10 Limit (lbs/hr)
Dried Corn Syrup (Frodex) Conveying System (93-04-W)	0.01	0.069
Corn Syrup Solids Conveying System (93-05-W)	0.01	0.066
Frodex Semi-bulk Packing System (93-08-W)	0.01	0.083
Cornstarch Bag Dump Stations 1 & 2 (93-09-W and 93-10-W)	0.01 each	0.10 each
Starch Bulk Loading (93-14-W)	0.01	0.273
Starch Bulk Loading Vacuum Cleanup System (93-15-W)	0.01	0.021
Starch Mixing and Bulk Bagging System #1 (93-16-W)	0.01	0.130
Starch Mixing and Bulk Bagging System #2 (93-17-W)	0.01	0.264

D.7.5 VOC Emissions [326 IAC 8-7] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

Pursuant to 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties), emissions of VOC from the following units shall not exceed the following limitations:

Unit Name	Unit ID	VOC Limit (lbs/hr)
Dried Corn Syrup Conveying System	93-04-W	0.03
Corn Syrup Solids Conveying System	93-05-W	0.03
Frodex Semi-Bulk Packing System	93-08-W	0.03
Corn Starch Bag Dumping Station #1	93-09-W	0.02
Corn Starch Bag Dumping Station #2	93-10-W	0.02
Starch Bulk Loading	93-14-W	0.09
Starch Bulk Loading Vacuum	93-15-W	0.01

D.7.6 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.7.7 Particulate Matter

(a) In order to assure compliance with D.7.1, D.7.2, D.7.3, and D.7.4, the control devices for PM, PM10, and PM2.5 control shall be in operation and control emissions from each facility at all times that the facility is in operation.

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

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

D.7.8 Parametric Monitoring

The Permittee shall record the pressure drop across the control device used in conjunction with each Starch Warehouse Area facility as listed below, at least once per day when the associated facility is in operation. When for any one reading, the pressure drop across the control device is outside of the normal range, the Permittee shall take reasonable response steps. The normal ranges for these units are the following unless a different upper-bound or lower bound values for these ranges are 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Channel 2 Receiver (93-32-W)	Dust Collector	0.1 - 6
Channel 3 Receiver (93-33-W)	Dust Collector	0.1 - 6
Channel 4 Receiver (93-34-W)	Dust Collector	0.1 - 6

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Channel 6 Receiver (Dextrin) (93-35-W)	Dust Collector	0.1 - 6
Channel 4/6 Packing (Dextrin) (93-37-W)	Dust Collector	0.1 - 6
Channel 2/3 Packing (93-36-W)	Dust Collector	0.1 - 6
Central Vacuum System (93-38-W)	Dust Collector	0.1 - 6
Dried Corn Syrup (Frodex) Conveying System (93-04-W)	Dust Collector	0.1 - 6
Corn Syrup Solids Conveying System (93-05-W)	Dust Collector	0.1 - 6
Frodex Semi-bulk Packing System (93-08-W)	Dust Collector	0.1 - 6
Cornstarch Bag Dump Stations 1 & 2 (93-09-W and 93-10-W)	Dust Collectors	0.1 - 6 each
Starch Bulk Loading Vacuum Cleanup System (93-15-W)	Dust Collector	0.1 - 6
P.G. Starch Receiver (93-18-W)	Dust Collector	0.1 - 6
P.G. Starch Packing (Unit ID 93-39-W)	Dust Collector	0.1 - 6
Corn Syrup Solids Mfg System #5 (93-40-W)	Dust Collector	1.0 - 8.0

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.7.9 Parametric Monitoring [40 CFR 64]

The Permittee shall record the pressure drop across the control device used in conjunction with each Starch Warehouse Area facility as listed below, at least once per day when the associated facility is in operation. When for any one reading, the pressure drop across the control device is outside of the normal range, the Permittee shall take reasonable response steps. The normal ranges for these units are the following unless a different upper-bound or lower bound values for these ranges are 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Starch Bulk Loading (93-14-W)	Dust Collector	0.1 - 6
Starch Mix and Bulk Bag Systems 1 & 2 (93-16-W and 93-17-W)	Dust Collectors	0.1 - 6 each

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.7.10 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 emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

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

D.7.11 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

(a) To document the compliance status with Conditions D.7.8 and D.7.9, the Permittee shall maintain a daily record of the pressure drop readings. 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).

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

SECTION D.8 EMISSIONS UNIT OPERATION CONDITIONS - Emergency Generator

Emissions Unit Description:

Insignificant Activity:

(bb) One (1) diesel-fired emergency generator (compression ignition), identified as 93-41-S, approved in 2016 for construction, with a rating of 496 HP, manufactured after 2009.

Under NSPS, Subpart IIII, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(cc) One (1) gasoline-fired emergency generator, identified as Generac Model GP5000 (manufactured in 2009, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.16 MMBtu/hr.

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(dd) One (1) gasoline-fired emergency generator, identified as Honda EU7000 (manufactured in 2014, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.1 MMBtu/hr.

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(ee) Six (6) kerosene-fired Dayton Torpedo heaters, approved in 2016 for construction, with a total combined heat input capacity of 1.05 MMBtu/hr.

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

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

D.8.1 Particulate Matter Limitations for Lake County [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2(a), the particulate matter emissions from the emergency generators and heaters listed above shall not exceed 0.03 grain per dry standard cubic foot.

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

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

SECTION E.1 **NSPS & NESHAP**

Emissions Unit Description:

(y) Natural gas-fired Package Boiler #1 (Unit ID 89-03-U), installed in 2006, with a maximum heat input capacity of 247 million Btu/hr, and exhausting to stack S89-03-U. Under NSPS 40 CFR 60, Subpart Db, Package Boiler #1 is a steam-generating unit with a heat input capacity greater than 100 million Btu/hr. Under NESHAP 40 CFR 63, Subpart DDDDD, this boiler is an existing affected unit.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

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

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

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

E.1.2 NSPS for Industrial-Commercial-Institutional Steam Generating Units Requirements [40 CFR 60, Subpart Db]

The Permittee shall comply with the provisions of the New Source Performance Standard for Industrial-Commercial-Institutional Steam Generating Units (included as attachment A to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

(1) 40 CFR 60.40b (a) and (j)
(2) 40 CFR 60.41b
(3) 40 CFR 60.44b (a)(1), (h), and (i)
(4) 40 CFR 60.46b (a) and (e)(1)
(5) 40 CFR 60.48b (b)(1), (c), (d), (e)(2)(3), and (f)
(6) 40 CFR 60.49b (a)(1)(3), (b), (d), (g), (i), (o), (v), and (w)

SECTION E.2 **NSPS & NESHAP**

Emissions Unit Description:

(fff) One (1) propylene oxide tank, approved in 2015 for construction, identified as 93-18-S, with a maximum capacity of 28,000 gallons, equipped with a thermal oxidizer (CE93-41-S). This tank also provides propylene oxide to other starch processes.

(fff1) One (1) 28,000 gallon horizontal propylene oxide tank (Unit ID 93-18-S), installed in 1988, with 95% efficient vapor recovery (liquid nitrogen condenser). This tank also provides propylene oxide to other starch processes.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

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

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1-1 for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984, for the emission unit(s) listed above, except as otherwise specified in 40 CFR 60, Subpart Kb.

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

E.2.2 NSPS for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984 [40 CFR 60, Subpart Kb]

The Permittee shall comply with the provisions of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984 (included as attachment B to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

(1) 40 CFR 60.110b(a)
(2) 40 CFR 60.111b
(3) 40 CFR 60.112b(a)(3)
(4) 40 CFR 60.113b(c)
(5) 40 CFR 60.115b(c)
(6) 40 CFR 60.116b(a), (b), (c), and (e)(3)(i)
(7) 40 CFR 60.117b

SECTION E.3 **NSPS & NESHAP**

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

(fff) One propylene oxide tank, approved in 2015 for construction, identified as 93-18-S, with a maximum capacity of 28,000 gallons, equipped with a thermal oxidizer (CE93-41-S). This tank also provides propylene oxide to other starch processes.

(fff1) One (1) 28,000 gallon horizontal propylene oxide tank (Unit ID 93-18-S), installed in 1988, with 95% efficient vapor recovery (liquid nitrogen condenser). This tank also provides propylene oxide to other starch processes.

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

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

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

(a) Pursuant to 40 CFR 63.1, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart EEEE.

(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.3.2 Organic Liquids Distribution NESHAP [326 IAC 20-81][40 CFR Part 63, Subpart EEEE]

The Permittee shall comply with the following provisions of 40 CFR 63, Subpart EEEE (included as Attachment C to the operating permit), which are incorporated by reference as 326 IAC 20, for the emission units(s) listed above:

(1) 40 CFR 63.2330
(2) 40 CFR 63.2334(a)
(3) 40 CFR 63.2338(a), (b), (c)(2), (d), (e)
(4) 40 CFR 63.2342(a), (d)
(5) 40 CFR 63.2346(a)(1),(2),(c), (e) and (i)
(6) 40 CFR 63.2350
(7) 40 CFR 63.2354(a)(1),(2),(b) ,(c)
(8) 40 CFR 63.2358(a),(b)(2)
(9) 40 CFR 63.2362(a)
(10) 40 CFR 63.2366
(11) 40 CFR 63.2370
(12) 40 CFR 63.2374
(13) 40 CFR 63.2378(a), and (c)
(14) 40 CFR 63.2382(a), (b)(2), (c), (d)(1),(2)(i),(ii),(iii),(iv),(vi)
(15) 40 CFR 63.2386(a), (b), (c)(1-7), (8)(i),(ii), (d)(1), (2)(i), and (e)

(16) 40 CFR 63.2390 (a), (b) and (d)
(17) 40 CFR 63.2394
(18) 40 CFR 63.2396(a)
(19) 40 CFR 63.2398
(20) 40 CFR 63.2402
(21) 40 CFR 63.2406
(22) Table 2, Items 4.a., 9.b.
(23) Table 3, Item 1
(24) Table 4, Items 1 and 4
(25) Table 5, Item 1
(26) Table 6
(27) Table 7, Items 3.a, 4
(28) Table 8, Items 1,2
(29) Table 10, Items 5 and 6
(30) Table 11
(31) Table 12

SECTION E.4 **NSPS & NESHAP**

Emissions Unit Description:

(y) Natural gas-fired Package Boiler #1 (Unit ID 89-03-U), installed in 2006, with a maximum heat input capacity of 247 million Btu/hr, and exhausting to stack S89-03-U. Under NSPS 40 CFR 60 Subpart Db, Package Boiler #1 is a steam-generating unit with a heat input capacity greater than 100 million Btu/hr. Under NESHAP 40 CFR 63, Subpart DDDDD, this boiler is an existing affected unit.

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

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

E.4.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.1, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart DDDDD.

(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 Industrial, Commercial, and Institutional Boilers and Process Heaters NESHAP [326 IAC 20-95][40 CFR Part 63, Subpart DDDDD]

The Permittee shall comply with the following provisions of the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (included as Attachment D to the operating permit), which are incorporated by reference as 326 IAC 20, for the emission unit(s) listed above:

(1) 40 CFR 63.7480
(2) 40 CFR 63.7485
(3) 40 CFR 63.7490(a)(1), (d)
(4) 40 CFR 63.7495(b), (d)
(5) 40 CFR 63.7499(l)
(6) 40 CFR 63.7500(a)(1), (3)
(7) 40 CFR 63.7501
(8) 40 CFR 63.7505(a)
(9) 40 CFR 63.7515(e)
(10) 40 CFR 63.7540(a)(10), (b)
(11) 40 CFR 63.7545(a), (b)
(12) 40 CFR 63.7550(a), (b), (c), (d)
(13) 40 CFR 63.7555(a)
(14) 40 CFR 63.7560
(15) 40 CFR 63.7565
(16) 40 CFR 63.7570
(17) 40 CFR 63.7575

(18) Table 3 - Work Practice Standards
(19) Table 9 - Reporting Requirements
(20) Table 10 - Applicability of General Provisions to Subpart DDDDD

SECTION E.5 NSPS & NESHAP

Emissions Unit Description:

Insignificant Activity:

(bb) One (1) diesel-fired emergency generator (compression ignition), identified as 93-41-S, approved in 2016 for construction, with a rating of 496 HP, manufactured after 2009.

Under NSPS, Subpart IIII, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.5.1 General Provisions Relating to the New Source Performance Standards [326 IAC 12-1] [40 CFR 60, Subpart A]

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

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

E.5.2 NSPS for Stationary Compression Ignition Internal Combustion Engines [326 IAC 12-1, 40 CFR 60, Subpart IIII]

The Permittee shall comply with the provisions of the New Source Performance Standards for Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII) (326 IAC 12) (included as Attachment E to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

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

SECTION E.6 **NSPS & NESHAP**

Emissions Unit Description:

Insignificant Activity:

(bb) One (1) diesel-fired emergency generator (compression ignition), identified as 93-41-S, approved in 2016 for construction, with a rating of 496 HP, manufactured after 2009.

Under NSPS, Subpart IIII, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(cc) One (1) gasoline-fired emergency generator, identified as Generac Model GP5000 (manufactured in 2009, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.16 MMBtu/hr.

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(dd) One (1) gasoline-fired emergency generator, identified as Honda EU7000 (manufactured in 2014, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.1 MMBtu/hr.

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

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

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

E.6.1 National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-82][40 CFR 63, Subpart ZZZZ]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment F to the operating permit), which are incorporated by reference as 326 IAC 20, for the emission unit(s) listed above:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585(a) and (b)
(3) 40 CFR 63.6590(a)(2)(ii), (c)(6)
(4) 40 CFR 63.6595(a)(5)
(5) 40 CFR 63.6605
(6) 40 CFR 63.6665
(7) 40 CFR 63.6670
(8) 40 CFR 63.6675

SECTION E.7 NSPS & NESHAP

Emissions Unit Description:

Insignificant Activity:

(cc) One (1) gasoline-fired emergency generator, identified as Generac Model GP5000 (manufactured in 2009, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.16 MMBtu/hr.

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(dd) One (1) gasoline-fired emergency generator, identified as Honda EU7000 (manufactured in 2014, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.1 MMBtu/hr.

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.7.1 General Provisions Relating to the New Source Performance Standards [326 IAC 12-1] [40 CFR 60, Subpart A]

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

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

E.7.2 NSPS for Stationary Spark Ignition Internal Combustion Engines [326 IAC 12-1, 40 CFR 60, Subpart JJJJ]

Pursuant to 40 CFR 60, Subpart JJJJ, the Permittee shall comply with the following provisions of the New Source Performance Standards for Spark Ignition Internal Combustion Engines (40 CFR 60, Subpart JJJJ) (326 IAC 12) (included as Attachment G to the operating permit), for the emission unit(s) listed above:

(1) 40 CFR 60.4230(a)(6)
(2) 40 CFR 60.4233(a)
(3) 40 CFR 60.4234
(4) 40 CFR 60.4235
(5) 40 CFR 60.4236(a), (d)
(6) 40 CFR 60.4243(a), (d)

(7) 40 CFR 60.4245
(8) 40 CFR 60.4246
(9) 40 CFR 60.4248
(10) Table 3

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

Source Name: Cargill, Inc.
Source Address: 1100 Indianapolis Blvd., Hammond, Indiana IN 46320
Part 70 Permit No.: T089-36144-00203

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: Cargill, Inc.
Source Address: 1100 Indianapolis Blvd., Hammond, Indiana IN 46320
Part 70 Permit No.: T089-36144-00203

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

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

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

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

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

If any of the following are not applicable, mark N/A **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
100 N. Senate Avenue
Indianapolis, IN 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

Part 70 Quarterly Report

Source Name: Cargill, Inc.
Source Address: 1100 Indianapolis Blvd, Hammond, Indiana 46320
Part 70 Permit No.: T089-36144-00203
Facility: 800-04-E
Parameter: Total SO2 emissions
Limits: Less than forty (40) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Quarter _____ YEAR:_____

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

☐ No deviations occurred in this quarter.
☐ Deviation/s occurred in this quarter.

Submitted by: _____

Title / Position: _____

Signature:_____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 N. Senate Avenue
Indianapolis, IN 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

Part 70 Quarterly Report

Source Name: Cargill, Inc.
Source Address: 1100 Indianapolis Blvd, Hammond, Indiana 46320
Part 70 Permit No.: T089-36144-00203
Facility: 800-04-E
Parameter: Total H2S emissions
Limits: Less than ten (10) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Quarter _____ YEAR:_____

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

☐ No deviations occurred in this quarter.
☐ Deviation/s occurred in this quarter.

Submitted by: _____

Title / Position: _____

Signature:_____

Date: _____

Phone: _____

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

100 N. Senate Avenue
Indianapolis, IN 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

Part 70 Quarterly Report

Source Name: Cargill, Inc.
Source Address: 1100 Indianapolis Blvd, Hammond, Indiana 46320
Part 70 Permit No.: T089-36144-00203
Facility: 121-01-G, 89-01-G, 124A-01-G, 104-01-R, and 800-04-E
Parameter: Total SO2 emissions - 326 IAC 7-4.1-5(b)
Limits: quarterly report of the 12 month rolling average of SO2 emissions

Quarter _____ YEAR:_____

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

☐ No deviations occurred in this quarter.
☐ Deviation/s occurred in this quarter.

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: Cargill, Inc.
Source Address: 1100 Indianapolis Blvd., Hammond, Indiana 46320
Part 70 Permit No.: T089-36144-00203

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
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: _____

Attachment A

Part 70 Operating Permit Renewal No: T089-36144-00203

[Downloaded from the eCFR on October 15, 2014]

Electronic Code of Federal Regulations

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_2 standards under subpart D (§60.42 and §60.43).

(c) 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.

(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, subpart AAAA, or subpart CCCC of this part is not subject to this subpart.

(i) Affected facilities (*i.e.,* heat recovery steam generators) that are associated with stationary combustion 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 affected facilities (*i.e.* heat recovery steam generators with duct burners) that are capable of combusting more than 29 MW (100 MMBtu/h) heat input of fossil fuel. If the affected facility (*i.e.* 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 stationary combustion 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.

(l) Affected facilities that also meet the applicability requirements under subpart BB of this part (Standards of Performance for Kraft Pulp Mills) are subject to the SO_2 and NO_X standards under this subpart and the PM standards under subpart BB.

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

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009; 77 FR 9459, Feb. 16, 2012]

§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), 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), 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 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_2 control 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_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. For gasified coal or oil that is desulfurized prior to combustion, the *Potential sulfur dioxide emission rate* is the theoretical SO_2 emissions (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.

Temporary boiler means any gaseous or liquid fuel-fired steam generating unit that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A 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.

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_2 emission control, has a SO_2 emission 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_2 emission 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; 77 FR 9459, Feb. 16, 2012]

§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_2 in 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_2 emission 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_2 emission 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_2 emissions and

(2) Emissions from the pretreated fuel (without combustion or post-combustion SO_2 control) 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_2 control system is not being operated because of malfunction or maintenance of the SO_2 control 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_2 emission 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_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 8 percent (0.08) of the potential SO_2 emission 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_2 emission rate of 140 ng/J (0.32 lb/MMBtu) heat input or less are exempt from the SO_2 emissions 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_2 in 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.

(4) As an alternative to meeting the requirements under paragraph (k)(1) of this section, modified facilities that combust coal or a mixture of coal with other fuels shall not cause to be discharged into the atmosphere 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) and 520 ng/J (1.2 lb/MMBtu) heat input.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011]

§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_2 emissions 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_2 emissions 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 combusts 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. An owner or operator of an affected facility that elects to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and is subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less is 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_2 or 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_2 or 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; 77 FR 9459, Feb. 16, 2012]

§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:

	Nitrogen oxide emission limits (expressed as NO_2) heat input	
Fuel/steam generating unit type	**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

Fuel/steam generating unit type	Nitrogen oxide emission limits (expressed as NO_2) heat input	
	ng/J	lb/MMBTu
(ii) Spreader stoker and fluidized bed combustion	260	0.60
(iii) Pulverized coal	300	0.70
(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 only 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 (d) 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 coal or oil, natural gas (or any combination of the three), and wood, 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, oil, natural gas (or any combination of the three), combusted in the affected facility, as determined pursuant to paragraph (a) or (b) of this section. This standard does not apply to an affected facility that is subject to and in compliance with 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, natural gas (or any combination of the three).

(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 and/or distillate oil with a potential SO_2 emissions rate of 26 ng/J (0.060 lb/MMBtu) or less 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, distillate oil, or a mixture of these fuels 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, distillate oil, or a mixture of these fuels.

(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 only 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:

(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 is first, no owner or operator of an affected facility that commenced construction after July 9, 1997 shall cause to be discharged into the atmosphere from that affected facility any gases that contain NOx (expressed as NO2) in excess of the following limits:

(1) 86 ng/J (0.20 lb/MMBtu) heat input if the affected facility combusts coal, oil, or natural gas (or any combination of the three), alone or with any other fuels. The affected facility is not subject to this limit if it is subject to and in compliance with 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 any combination of the three); 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; 77 FR 9459, Feb. 16, 2012]

§60.45b Compliance and performance test methods and procedures for sulfur dioxide.

(a) The SO_2 emission 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_2 control 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_2 emission rate (% P_s) and the SO_2 emission 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_2 standards 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_2 emission 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_2 emission 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_2 emission rate, 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.

(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_2 emission 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:

$$E_{ho}^{o} = \frac{E_{ho} - E_w(1 - X_1)}{X_1}$$

Where:

E_{ho}^{o} = Adjusted hourly SO_2 emission rate, 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 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_2 emission 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_2 inlet 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_2 inlet rate (E_{hi}^o) is used. The E_{hi}^o is computed using the following formula:

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

Where:

E_{hi}^o = Adjusted hourly SO_2 inlet rate, ng/J (lb/MMBtu); and

E_{hi} = Hourly SO_2 inlet 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_2 emission 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_2 emission 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_2 emission 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_2 emission 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_2 emissions 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_2 emission 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_2 control 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_2 standard 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_2 sample 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_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.

(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 or Method 320 of appendix A of part 63 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_2 concentration.

(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, or 7E of appendix A of this part, Method 320 of appendix A of part 63 of this chapter, 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, or 7E of appendix A of this part, Method 320 of appendix A of part 63, 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) 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) 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.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011; 77 FR 9460, Feb. 16, 2012; 79 FR 11249, Feb. 27, 2014]

§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_2 standards 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_2 concentration 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_2 data 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_2 emissions 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_2 input rate, or

(2) Measuring SO_2 according to Method 6B of appendix A of this part at the inlet or outlet to the SO_2 control system. An initial stratification test is required to verify the adequacy of the sampling location for Method 6B of appendix A of this part. 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 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 or Method 320 of appendix A of part 63 of this chapter 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_2 emission 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_2 emission 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_2 emission 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_2 CEMS at the inlet to the SO_2 control device is 125 percent of the maximum estimated hourly potential SO_2 emissions of the fuel combusted, and the span value of the CEMS at the outlet to the SO_2 control device is 50 percent of the maximum estimated hourly potential SO_2 emissions of the fuel combusted. Alternatively, SO_2 span 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_2 monitors 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_2 monitors 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_2 monitoring 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_2 emission 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; 79 FR 11249, Feb. 27, 2014]

§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), (5), or (6) of this section who 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 §60.43b 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 §60.46d(d)(7).

(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) 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.
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), (6), or (7) 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_2 or 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 current requirements in section §60.48Da of this part; or

(6) The affected facility uses an ESP as the primary PM control device and uses an ESP predictive model to monitor the performance of the ESP developed in accordance and operated according to the most current requirements in section §60.48Da of this part; or

(7) 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.

(l) An owner or operator of an affected facility that is subject to an opacity standard under §60.43b(f) is not required to operate a COMS provided that the unit burns only gaseous fuels and/or liquid fuels (excluding residue oil) with a potential SO_2 emissions rate no greater than 26 ng/J (0.060 lb/MMBtu), and the unit operates according to a written site-specific monitoring plan approved by the permitting authority is not required to operate a COMS. 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 §60.49b(h).

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§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_2 level);

(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_2 standards 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_2 emission 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_2 control 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_2 emissions 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_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 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_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 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_2 standards 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 (such as a current, valid purchase contract, tariff sheet, or transportation contract) 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.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5089, Jan. 28, 2009; 77 FR 9461, Feb. 16, 2012]

Attachment B

Part 70 Operating Permit Renewal No: T089-36144-00203

[Downloaded from the eCFR on May 13, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart 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]

Attachment C

Part 70 Operating Permit Renewal No: T089-36144-00203

[Downloaded from the eCFR on May 21, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

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

Subpart EEEE—National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)

Source: 69 FR 5063, Feb. 3, 2004, unless otherwise noted.

What This Subpart Covers

§ 63.2330 What is the purpose of this subpart?

This subpart establishes national emission limitations, operating limits, and work practice standards for organic hazardous air pollutants (HAP) emitted from organic liquids distribution (OLD) (non-gasoline) operations at major sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations, operating limits, and work practice standards.

§ 63.2334 Am I subject to this subpart?

(a) Except as provided for in paragraphs (b) and (c) of this section, you are subject to this subpart if you own or operate an OLD operation that is located at, or is part of, a major source of HAP emissions. An OLD operation may occupy an entire plant site or be collocated with other industrial (*e.g.,* manufacturing) operations at the same plant site.

(b) Organic liquid distribution operations located at research and development facilities, consistent with section 112(c)(7) of the Clean Air Act (CAA), are not subject to this subpart.

(c) Organic liquid distribution operations do not include the activities and equipment, including product loading racks, used to process, store, or transfer organic liquids at facilities listed in paragraph (c) (1) and (2) of this section.

(1) Oil and natural gas production field facilities, as the term “facility” is defined in § 63.761 of subpart HH.

(2) Natural gas transmission and storage facilities, as the term “facility” is defined in § 63.1271 of subpart HHH.

§ 63.2338 What parts of my plant does this subpart cover?

(a) This subpart applies to each new, reconstructed, or existing OLD operation affected source.

(b) Except as provided in paragraph (c) of this section, the affected source is the collection of activities and equipment used to distribute organic liquids into, out of, or within a facility that is a major source of HAP. The affected source is composed of:

(1) All storage tanks storing organic liquids.

(2) All transfer racks at which organic liquids are loaded into or unloaded out of transport vehicles and/or containers.

(3) All equipment leak components in organic liquids service that are associated with:

(i) Storage tanks storing organic liquids;

(ii) Transfer racks loading or unloading organic liquids;

(iii) Pipelines that transfer organic liquids directly between two storage tanks that are subject to this subpart;

(iv) Pipelines that transfer organic liquids directly between a storage tank subject to this subpart and a transfer rack subject to this subpart; and

(v) Pipelines that transfer organic liquids directly between two transfer racks that are subject to this subpart.

(4) All transport vehicles while they are loading or unloading organic liquids at transfer racks subject to this subpart.

(5) All containers while they are loading or unloading organic liquids at transfer racks subject to this subpart.

(c) The equipment listed in paragraphs (c)(1) through (4) of this section and used in the identified operations is excluded from the affected source.

(1) Storage tanks, transfer racks, transport vehicles, containers, and equipment leak components that are part of an affected source under another 40 CFR part 63 national emission standards for hazardous air pollutants (NESHAP).

(2) Non-permanent storage tanks, transfer racks, transport vehicles, containers, and equipment leak components when used in special situation distribution loading and unloading operations (such as maintenance or upset liquids management).

(3) Storage tanks, transfer racks, transport vehicles, containers, and equipment leak components when used to conduct maintenance activities, such as stormwater management, liquid removal from tanks for inspections and maintenance, or changeovers to a different liquid stored in a storage tank.

(d) An affected source is a new affected source if you commenced construction of the affected source after April 2, 2002, and you meet the applicability criteria in § 63.2334 at the time you commenced operation.

(e) An affected source is reconstructed if you meet the criteria for reconstruction as defined in § 63.2.

(f) An affected source is existing if it is not new or reconstructed.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42904, July 28, 2006]

§ 63.2342 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 the schedule identified in paragraph (a)(1), (a)(2), or (a)(3) of this section, as applicable.

(1)(i) Except as provided in paragraph (a)(1)(ii) of this section, if you startup your new affected source on or before February 3, 2004 or if you reconstruct your affected source on or before February 3, 2004, you must comply with the emission limitations, operating limits, and work practice standards for new and reconstructed sources in this subpart no later than February 3, 2004.

(ii) For any emission source listed in paragraph § 63.2338(b) at an affected source that commenced construction or reconstruction after April 2, 2002, but before February 3, 2004, that is required to be controlled based on the applicability criteria in this subpart, but:

(A) Would not have been required to be controlled based on the applicability criteria as proposed for this subpart, you must comply with the emission limitations, operating limits, and work practice standards for each such emission source based on the schedule found in paragraph (b) of this section or at startup, whichever is later; or

(B) Would have been subject to a less stringent degree of control requirement as proposed for this subpart, you must comply with the emission limitations, operating limits, and work practice standards in this subpart for each such emission source based on the schedule found in paragraph (b) of this section or at startup, whichever is later, and if you start up your affected new or reconstructed source before February 5, 2007, you must comply with the emission limitations, operating limits, and work practice standards for each such emission source as proposed for this subpart, until you are required to comply with the emission limitations, operating limits, and work practice standards in this subpart for each such emission source based on the schedule found in paragraph (b) of this section.

(2) If you commence construction of or reconstruct your affected source after February 3, 2004, you must comply with the emission limitations, operating limits, and work practice standards for new and reconstructed sources in this subpart upon startup of your affected source.

(3) If, after startup of a new affected source, the total actual annual facility-level organic liquid loading volume at that source exceeds the criteria for control in Table 2 to this subpart, items 9 and 10, the owner or operator must comply with the transfer rack requirements specified in § 63.2346(b) immediately; that is, be in compliance the first day of the period following the end of the 3-year period triggering the control criteria.

(b)(1) If you have an existing affected source, you must comply with the emission limitations, operating limits, and work practice standards for existing affected sources no later than February 5, 2007, except as provided in paragraphs (b)(2) and (3) of this section.

(2) Floating roof storage tanks at existing affected sources must be in compliance with the work practice standards in Table 4 to this subpart, item 1, at all times after the next degassing and cleaning activity or within 10 years after February 3, 2004, whichever occurs first. If the first degassing and cleaning activity occurs during the 3 years following February 3, 2004, the compliance date is February 5, 2007.

(3)(i) If an addition or change other than reconstruction as defined in § 63.2 is made to an existing affected facility that causes the total actual annual facility-level organic liquid loading volume to exceed the criteria for control in Table 2 to this subpart, items 7 and 8, the owner or operator must comply with the transfer rack requirements specified in § 63.2346(b) immediately; that is, be in compliance the first day of the period following the end of the 3-year period triggering the control criteria.

(ii) If the owner or operator believes that compliance with the transfer rack emission limits cannot be achieved immediately, as specified in paragraph (b)(3)(i) of this section, the owner or operator may submit a request for a compliance extension, as specified in paragraphs (b)(3)(ii)(A) through (I) of this section. Subject to paragraph (b)(3)(ii)(B) of this section, until an extension of compliance has been granted by the Administrator (or a State with an approved permit program) under this paragraph (b)(3)(ii), the owner or operator of the transfer rack subject to the requirements of this section shall comply with all applicable requirements of this subpart. Advice on requesting an extension of compliance may be obtained from the Administrator (or the State with an approved permit program).

(A) *Submittal.* The owner or operator shall submit a request for a compliance extension to the Administrator (or a State, when the State has an approved 40 CFR part 70 permit program and the source is required to obtain a 40 CFR part 70 permit under that program, or a State, when the State has been delegated the authority to implement and enforce the emission standard for that source) seeking an extension allowing the source up to 1 additional year to comply with the transfer rack standard, if such additional period is necessary for the installation of controls. The owner or operator of the affected source who has requested an extension of compliance under this paragraph (b)(3)(ii)(A) and who is otherwise required to obtain a title V permit shall apply for such permit, or apply to have the source's title V permit revised to incorporate the conditions of the extension of compliance. The conditions of an extension of compliance granted under this paragraph (b)(3)(ii)(A) will be incorporated into the affected source's title V permit according to the provisions of 40 CFR part 70 or Federal title V regulations in this chapter (42 U.S.C. 7661), whichever are applicable.

(B) *When to submit.* (*1*) Any request submitted under paragraph (b)(3)(ii)(A) of this section must be submitted in writing to the appropriate authority no later than 120 days prior to the affected source's compliance date (as specified in paragraph (b)(3)(i) of this section), except as provided for in paragraph (b)(3)(ii)(B)(*2*) of this section. Nonfrivolous

requests submitted under this paragraph (b)(3)(ii)(B)(*1*) will stay the applicability of the rule as to the emission points in question until such time as the request is granted or denied. A denial will be effective as of the date of denial.

(*2*) An owner or operator may submit a compliance extension request after the date specified in paragraph (b)(3)(ii)(B)(*1*) of this section provided the need for the compliance extension arose after that date, and before the otherwise applicable compliance date and the need arose due to circumstances beyond reasonable control of the owner or operator. This request must include, in addition to the information required in paragraph (b)(3)(ii)(C) of this section, a statement of the reasons additional time is needed and the date when the owner or operator first learned of the problems. Nonfrivolous requests submitted under this paragraph (b)(3)(ii)(B)(*2*) will stay the applicability of the rule as to the emission points in question until such time as the request is granted or denied. A denial will be effective as of the original compliance date.

(C) *Information required.* The request for a compliance extension under paragraph (b)(3)(ii)(A) of this section shall include the following information:

(*1*) The name and address of the owner or operator and the address of the existing source if it differs from the address of the owner or operator;

(*2*) The name, address, and telephone number of a contact person for further information;

(*3*) An identification of the organic liquid distribution operation and of the specific equipment for which additional compliance time is required;

(*4*) A description of the controls to be installed to comply with the standard;

(*5*) Justification for the length of time being requested; and

(*6*) A compliance schedule, including the date by which each step toward compliance will be reached. At a minimum, the list of dates shall include:

(*i*) The date by which on-site construction, installation of emission control equipment, or a process change is planned to be initiated;

(*ii*) The date by which on-site construction, installation of emission control equipment, or a process change is to be completed; and

(*iii*) The date by which final compliance is to be achieved.

(D) *Approval of request for extension of compliance.* Based on the information provided in any request made under paragraph (b)(3)(ii)(C) of this section, or other information, the Administrator (or the State with an approved permit program) may grant an extension of compliance with the transfer rack emission standard, as specified in paragraph (b)(3)(ii) of this section. The extension will be in writing and will—

(*1*) Identify each affected source covered by the extension;

(*2*) Specify the termination date of the extension;

(*3*) Specify the dates by which steps toward compliance are to be taken, if appropriate;

(*4*) Specify other applicable requirements to which the compliance extension applies (e.g., performance tests);

(*5*) Specify the contents of the progress reports to be submitted and the dates by which such reports are to be submitted, if required pursuant to paragraph (b)(3)(ii)(E) of this section.

(*6*) Under paragraph (b)(3)(ii) of this section, specify any additional conditions that the Administrator (or the State) deems necessary to assure installation of the necessary controls and protection of the health of persons during the extension period.

(E) *Progress reports.* The owner or operator of an existing source that has been granted an extension of compliance under paragraph (b)(3)(ii)(D) of this section may be required to submit to the Administrator (or the State with an approved permit program) progress reports indicating whether the steps toward compliance outlined in the compliance schedule have been reached.

(F) *Notification of approval or intention to deny.* (*1*) The Administrator (or the State with an approved permit program) will notify the owner or operator in writing of approval or intention to deny approval of a request for an extension of compliance within 30 calendar days after receipt of sufficient information to evaluate a request submitted under paragraph (b)(3)(ii) of this section. The Administrator (or the State) will notify the owner or operator in writing of the status of his/her application; that is, whether the application contains sufficient information to make a determination, within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted. The 30-day approval or denial period will begin after the owner or operator has been notified in writing that his/her application is complete. Failure by the Administrator to act within 30 calendar days to approve or disapprove a request submitted under paragraph (b)(3)(ii) of this section does not constitute automatic approval of the request.

(*2*) When notifying the owner or operator that his/her application is not complete, the Administrator will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 30 calendar days after he/she is notified of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(*3*) Before denying any request for an extension of compliance, the Administrator (or the State with an approved permit program) will notify the owner or operator in writing of the Administrator's (or the State's) intention to issue the denial, together with:

(*i*) Notice of the information and findings on which the intended denial is based; and

(*ii*) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the intended denial, additional information or arguments to the Administrator (or the State) before further action on the request.

(*4*) The Administrator's final determination to deny any request for an extension will be in writing and will set forth the specific grounds on which the denial is based. The final determination will be made within 30 calendar days after presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(G) *Termination of extension of compliance.* The Administrator (or the State with an approved permit program) may terminate an extension of compliance at an earlier date than specified if any specification under paragraph (b)(3)(ii)(D)(*3*) or paragraph (b)(3)(ii)(D)(*4*) of this section is not met. Upon a determination to terminate, the Administrator will notify, in writing, the owner or operator of the Administrator's determination to terminate, together with:

(*1*) Notice of the reason for termination; and

(*2*) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the determination to terminate, additional information or arguments to the Administrator before further action on the termination.

(*3*) A final determination to terminate an extension of compliance will be in writing and will set forth the specific grounds on which the termination is based. The final determination will be made within 30 calendar days after presentation of additional information or arguments, or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(H) The granting of an extension under this section shall not abrogate the Administrator's authority under section 114 of the CAA.

(I) *Limitation on use of compliance extension.* The owner or operator may request an extension of compliance under the provisions specified in paragraph (b)(3)(ii) of this section only once for each facility.

(c) If you have an area source that does not commence reconstruction but increases its emissions or its potential to emit such that it becomes a major source of HAP emissions and an existing affected source subject to this subpart, you must be in compliance by 3 years after the area source becomes a major source.

(d) You must meet the notification requirements in §§ 63.2343 and 63.2382(a), as applicable, according to the schedules in § 63.2382(a) and (b)(1) through (3) and in subpart A of this part. Some of these notifications must be submitted before the compliance dates for the emission limitations, operating limits, and work practice standards in this subpart.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42905, July 28, 2006]

§ 63.2343 What are my requirements for emission sources not requiring control?

This section establishes the notification, recordkeeping, and reporting requirements for emission sources identified in § 63.2338 that do not require control under this subpart (i.e., under paragraphs (a) through (e) of § 63.2346). Such emission sources are not subject to any other notification, recordkeeping, or reporting sections in this subpart, including § 63.2350(c), except as indicated in paragraphs (a) through (d) of this section.

(a) For each storage tank subject to this subpart having a capacity of less than 18.9 cubic meters (5,000 gallons) and for each transfer rack subject to this subpart that only unloads organic liquids (i.e., no organic liquids are loaded at any of the transfer racks), you must keep documentation that verifies that each storage tank and transfer rack identified in paragraph (a) of this section is not required to be controlled. The documentation must be kept up-to-date (i.e., all such emission sources at a facility are identified in the documentation regardless of when the documentation was last compiled) and must be in a form suitable and readily available for expeditious inspection and review according to § 63.10(b)(1), including records stored in electronic form in a separate location. The documentation may consist of identification of the tanks and transfer racks identified in paragraph (a) of this section on a plant site plan or process and instrumentation diagram (P&ID).

(b) For each storage tank subject to this subpart having a capacity of 18.9 cubic meters (5,000 gallons) or more that is not subject to control based on the criteria specified in Table 2 to this subpart, items 1 through 6, you must comply with the requirements specified in paragraphs (b)(1) through (3) of this section.

(1)(i) You must submit the information in § 63.2386(c)(1), (2), (3), and (10)(i) in either the Notification of Compliance Status, according to the schedule specified in Table 12 to this subpart, or in your first Compliance report, according to the schedule specified in § 63.2386(b), whichever occurs first.

(ii)(A) If you submit your first Compliance report before your Notification of Compliance Status, the Notification of Compliance Status must contain the information specified in § 63.2386(d)(3) and (4) if any of the changes identified in paragraph (d) of this section have occurred since the filing of the first Compliance report. If none of the changes identified in paragraph (d) of this section have occurred since the filing of the first Compliance report, you do not need to report the information specified in § 63.2386(c)(10)(i) when you submit your Notification of Compliance Status.

(B) If you submit your Notification of Compliance Status before your first Compliance report, your first Compliance report must contain the information specified in § 63.2386(d)(3) and (4) if any of the changes specified in paragraph (d) of this section have occurred since the filing of the Notification of Compliance Status.

(iii) If you are already submitting a Notification of Compliance Status or a first Compliance report under § 63.2386(c), you do not need to submit a separate Notification of Compliance Status or first Compliance report for each storage tank that meets the conditions identified in paragraph (b) of this section (i.e., a single Notification of Compliance Status or first Compliance report should be submitted).

(2)(i) You must submit a subsequent Compliance report according to the schedule in § 63.2386(b) whenever any of the events in paragraph (d) of this section occur, as applicable.

(ii) Your subsequent Compliance reports must contain the information in § 63.2386(c)(1), (2), (3) and, as applicable, in § 63.2386(d)(3) and (4). If you are already submitting a subsequent Compliance report under § 63.2386(d), you do not need to submit a separate subsequent Compliance report for each storage tank that meets the conditions identified in paragraph (b) of this section (i.e., a single subsequent Compliance report should be submitted).

(3) For each storage tank that meets the conditions identified in paragraph (b) of this section, you must keep documentation, including a record of the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid, that verifies the storage tank is not required to be controlled under this subpart. The documentation must be kept up-to-date and must be in a form suitable and readily available for expeditious inspection and review according to § 63.10(b)(1), including records stored in electronic form in a separate location.

(c) For each transfer rack subject to this subpart that loads organic liquids but is not subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, you must comply with the requirements specified in paragraphs (c)(1) through (3) of this section.

(1)(i) You must submit the information in § 63.2386(c)(1), (2), (3), and (10)(i) in either the Notification of Compliance Status, according to the schedule specified in Table 12 to this subpart, or a first Compliance report, according to the schedule specified in § 63.2386(b), whichever occurs first.

(ii)(A) If you submit your first Compliance report before your Notification of Compliance Status, the Notification of Compliance Status must contain the information specified in § 63.2386(d)(3) and (4) if any of the changes identified in paragraph (d) of this section have occurred since the filing of the first Compliance report. If none of the changes identified in paragraph (d) of this section have occurred since the filing of the first Compliance report, you do not need to report the information specified in § 63.2386(c)(10)(i) when you submit your Notification of Compliance Status.

(B) If you submit your Notification of Compliance Status before your first Compliance report, your first Compliance report must contain the information specified in § 63.2386(d)(3) and (4) if any of the changes specified in paragraph (d) of this section have occurred since the filing of the Notification of Compliance Status.

(iii) If you are already submitting a Notification of Compliance Status or a first Compliance report under § 63.2386(c), you do not need to submit a separate Notification of Compliance Status or first Compliance report for each transfer rack that meets the conditions identified in paragraph (b) of this section (i.e., a single Notification of Compliance Status or first Compliance report should be submitted).

(2)(i) You must submit a subsequent Compliance report according to the schedule in § 63.2386(b) whenever any of the events in paragraph (d) of this section occur, as applicable.

(ii) Your subsequent Compliance reports must contain the information in § 63.2386(c)(1), (2), (3) and, as applicable, in § 63.2386(d)(3) and (4). If you are already submitting a subsequent Compliance report under § 63.2386(d), you do not need to submit a separate subsequent Compliance report for each transfer rack that meets the conditions identified in paragraph (c) of this section (i.e., a single subsequent Compliance report should be submitted).

(3) For each transfer rack that meets the conditions identified in paragraph (c) of this section, you must keep documentation, including the records specified in § 63.2390(d), that verifies the transfer rack is not required to be controlled under this subpart. The documentation must be kept up-to-date and must be in a form suitable and readily available for expeditious inspection and review according to § 63.10(b)(1), including records stored in electronic form in a separate location.

(d) If one or more of the events identified in paragraphs (d)(1) through (4) of this section occur since the filing of the Notification of Compliance Status or the last Compliance report, you must submit a subsequent Compliance report as specified in paragraphs (b)(2) and (c)(2) of this section.

(1) Any storage tank or transfer rack became subject to control under this subpart EEEE; or

(2) Any storage tank equal to or greater than 18.9 cubic meters (5,000 gallons) became part of the affected source but is not subject to any of the emission limitations, operating limits, or work practice standards of this subpart; or

(3) Any transfer rack (except those racks at which only unloading of organic liquids occurs) became part of the affected source; or

(4) Any of the information required in § 63.2386(c)(1), § 63.2386(c)(2), or § 63.2386(c)(3) has changed.

[71 FR 42906, July 28, 2006, as amended at 73 FR 21830, Apr. 23, 2008]

Emission Limitations, Operating Limits, and Work Practice Standards

§ 63.2346 What emission limitations, operating limits, and work practice standards must I meet?

(a) *Storage tanks.* For each storage tank storing organic liquids that meets the tank capacity and liquid vapor pressure criteria for control in Table 2 to this subpart, items 1 through 5, you must comply with paragraph (a)(1), (a)(2), (a)(3), or (a)(4) of this section. For each storage tank storing organic liquids that meets the tank capacity and liquid vapor pressure criteria for control in Table 2 to this subpart, item 6, you must comply with paragraph (a)(1), (a)(2), or (a)(4) of this section.

(1) Meet the emission limits specified in Table 2 to this subpart and comply with the applicable requirements specified in 40 CFR part 63, subpart SS, for meeting emission limits, except substitute the term “storage tank” at each occurrence of the term “storage vessel” in subpart SS.

(2) Route emissions to fuel gas systems or back into a process as specified in 40 CFR part 63, subpart SS.

(3) Comply with 40 CFR part 63, subpart WW (control level 2).

(4) Use a vapor balancing system that complies with the requirements specified in paragraphs (a)(4)(i) through (vii) of this section and with the recordkeeping requirements specified in § 63.2390(e).

(i) The vapor balancing system must be designed and operated to route organic HAP vapors displaced from loading of the storage tank to the transport vehicle from which the storage tank is filled.

(ii) Transport vehicles must have a current certification in accordance with the United States Department of Transportation (U.S. DOT) pressure test requirements of 49 CFR part 180 for cargo tanks and 49 CFR 173.31 for tank cars.

(iii) Organic liquids must only be unloaded from cargo tanks or tank cars when vapor collection systems are connected to the storage tank's vapor collection system.

(iv) No pressure relief device on the storage tank, or on the cargo tank or tank car, shall open during loading or as a result of diurnal temperature changes (breathing losses).

(v) Pressure relief devices must be set to no less than 2.5 pounds per square inch guage (psig) at all times to prevent breathing losses. Pressure relief devices may be set at values less than 2.5 psig if the owner or operator provides rationale in the notification of compliance status report explaining why the alternative value is sufficient to prevent breathing losses at all times. The owner or operator shall comply with paragraphs (a)(4)(v)(A) through (C) of this section for each pressure relief valve.

(A) The pressure relief valve shall be monitored quarterly using the method described in § 63.180(b).

(B) An instrument reading of 500 parts per million by volume (ppmv) or greater defines a leak.

(C) When a leak is detected, it shall be repaired as soon as practicable, but no later than 5 days after it is detected, and the owner or operator shall comply with the recordkeeping requirements of § 63.181(d)(1) through (4).

(vi) Cargo tanks and tank cars that deliver organic liquids to a storage tank must be reloaded or cleaned at a facility that utilizes the control techniques specified in paragraph (a)(4)(vi)(A) or (a)(4)(vi)(B) of this section.

(A) The cargo tank or tank car must be connected to a closed-vent system with a control device that reduces inlet emissions of total organic HAP by 95 percent by weight or greater or to an exhaust concentration less than or equal to 20 ppmv, on a dry basis corrected to 3 percent oxygen for combustion devices using supplemental combustion air.

(B) A vapor balancing system designed and operated to collect organic HAP vapor displaced from the cargo tank or tank car during reloading must be used to route the collected vapor to the storage tank from which the liquid being transferred originated or to another storage tank connected to a common header.

(vii) The owner or operator of the facility where the cargo tank or tank car is reloaded or cleaned must comply with paragraphs (a)(4)(vii)(A) through (D) of this section.

(A) Submit to the owner or operator of the storage tank and to the Administrator a written certification that the reloading or cleaning facility will meet the requirements of paragraph (a)(4)(vii)(A) through (C) of this section. The certifying entity may revoke the written certification by sending a written statement to the owner or operator of the storage tank giving at least 90 days notice that the certifying entity is rescinding acceptance of responsibility for compliance with the requirements of this paragraph (a)(4)(vii) of this section.

(B) If complying with paragraph (a)(4)(vi)(A) of this section, comply with the requirements for a closed vent system and control device as specified in this subpart EEEE. The notification requirements in § 63.2382 and the reporting requirements in § 63.2386 do not apply to the owner or operator of the offsite cleaning or reloading facility.

(C) If complying with paragraph (a)(4)(vi)(B) of this section, keep the records specified in § 63.2390(e)(3) or equivalent recordkeeping approved by the Administrator.

(D) After the compliance dates specified in § 63.2342, at an offsite reloading or cleaning facility subject to § 63.2346(a)(4), compliance with the monitoring, recordkeeping, and reporting provisions of any other subpart of this part 63 that has monitoring, recordkeeping, and reporting provisions constitutes compliance with the monitoring, recordkeeping and reporting provisions of § 63.2346(a)(4)(vii)(B) or § 63.2346(a)(4)(vii)(C). You must identify in your notification of compliance status report required by § 63.2382(d) the subpart of this part 63 with which the owner or operator of the offsite reloading or cleaning facility complies.

(b) *Transfer racks.* For each transfer rack that is part of the collection of transfer racks that meets the total actual annual facility-level organic liquid loading volume criterion for control in Table 2 to this subpart, items 7 through 10, you must comply with paragraph (b)(1), (b)(2), or (b)(3) of this section for each arm in the transfer rack loading an organic liquid whose organic HAP content meets the organic HAP criterion for control in Table 2 to this subpart, items 7 through 10. For existing affected sources, you must comply with paragraph (b)(1), (b)(2), or (b)(3)(i) of this section during the loading of organic liquids into transport vehicles. For new affected sources, you must comply with paragraph (b)(1), (b)(2), or (b)(3)(i) and (ii) of this section during the loading of organic liquids into transport vehicles and containers. If the total actual annual facility-level organic liquid loading volume at any affected source is equal to or greater than the loading volume criteria for control in Table 2 to this subpart, but at a later date is less than the loading volume criteria for control, compliance with paragraph (b)(1), (b)(2), or (b)(3) of this section is no longer required. For new sources and reconstructed sources, as defined in § 63.2338(d) and (e), if at a later date, the total actual annual facility-level organic liquid loading volume again becomes equal to or greater than the loading volume criteria for control in Table 2 to this subpart, the owner or operator must comply with paragraph (b)(1), (b)(2), or (b)(3)(i) and (ii) of this section immediately, as specified in § 63.2342(a)(3). For existing sources, as defined in § 63.2338(f), if at a later date, the total actual annual facility-level organic liquid loading volume again becomes equal to or greater than the loading volume criteria for control in Table 2 to this subpart, the owner or operator must comply with paragraph (b)(1), (b)(2), or (b)(3)(i) of this section immediately, as specified in § 63.2342(b)(3)(i), unless an alternative compliance schedule has been approved under § 63.2342(b)(3)(ii) and subject to the use limitation specified in § 63.2342(b)(3)(ii)(I).

(1) Meet the emission limits specified in Table 2 to this subpart and comply with the applicable requirements for transfer racks specified in 40 CFR part 63, subpart SS, for meeting emission limits.

(2) Route emissions to fuel gas systems or back into a process as specified in 40 CFR part 63, subpart SS.

(3)(i) Use a vapor balancing system that routes organic HAP vapors displaced from the loading of organic liquids into transport vehicles to the storage tank from which the liquid being loaded originated or to another storage tank connected to a common header.

(ii) Use a vapor balancing system that routes the organic HAP vapors displaced from the loading of organic liquids into containers directly (e.g., no intervening tank or containment area such as a room) to the storage tank from which the liquid being loaded originated or to another storage tank connected to a common header.

(c) *Equipment leak components.* For each pump, valve, and sampling connection that operates in organic liquids service for at least 300 hours per year, you must comply with the applicable requirements under 40 CFR part 63, subpart TT (control level 1), subpart UU (control level 2), or subpart H. Pumps, valves, and sampling connectors that are insulated to provide protection against persistent sub-freezing temperatures are subject to the “difficult to monitor” provisions in the applicable subpart selected by the owner or operator. This paragraph only applies if the affected source has at least one storage tank or transfer rack that meets the applicability criteria for control in Table 2 to this subpart.

(d) *Transport vehicles.* For each transport vehicle equipped with vapor collection equipment that is loaded at a transfer rack that is subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, you must comply with paragraph (d)(1) of this section. For each transport vehicle without vapor collection equipment that is loaded at a transfer rack that is subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, you must comply with paragraph (d)(2) of this section.

(1) Follow the steps in 40 CFR 60.502(e) to ensure that organic liquids are loaded only into vapor-tight transport vehicles and comply with the provisions in 40 CFR 60.502(f) through (i), except substitute the term “transport vehicle” at each occurrence of the term “tank truck” or “gasoline tank truck” in those paragraphs.

(2) Ensure that organic liquids are loaded only into transport vehicles that have a current certification in accordance with the U.S. Department of Transportation (DOT) pressure test requirements in 49 CFR part 180 for cargo tanks or 49 CFR 173.31 for tank cars.

(e) *Operating limits.* For each high throughput transfer rack, you must meet each operating limit in Table 3 to this subpart for each control device used to comply with the provisions of this subpart whenever emissions from the loading of organic liquids are routed to the control device. For each storage tank and low throughput transfer rack, you must comply with the requirements for monitored parameters as specified in subpart SS of this part for storage vessels and, during the loading of organic liquids, for low throughput transfer racks, respectively. Alternatively, you may comply with the operating limits in Table 3 to this subpart.

(f) For noncombustion devices, if you elect to demonstrate compliance with a percent reduction requirement in Table 2 to this subpart using total organic compounds (TOC) rather than organic HAP, you must first demonstrate, subject to the approval of the Administrator, that TOC is an appropriate surrogate for organic HAP in your case; that is, for your storage tank(s) and/or transfer rack(s), the percent destruction of organic HAP is equal to or higher than the percent destruction of TOC. This demonstration must be conducted prior to or during the initial compliance test.

(g) As provided in § 63.6(g), you may request approval from the Administrator to use an alternative to the emission limitations, operating limits, and work practice standards in this section. You must follow the procedures in § 63.177(b) through (e) in applying for permission to use such an alternative. If you apply for permission to use an alternative to the emission limitations, operating limits, and work practice standards in this section, you must submit the information described in § 63.6(g)(2).

(h) [Reserved]

(i) Opening of a safety device is allowed at any time that it is required to avoid unsafe operating conditions.

(j) If you elect to comply with this subpart by combining emissions from different emission sources subject to this subpart in a single control device, then you must comply with the provisions specified in § 63.982(f).

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42908, July 28, 2006; 73 FR 40981, July 17, 2008; 73 FR 21830, Apr. 23, 2008]

General Compliance Requirements

§ 63.2350 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations, operating limits, and work practice standards in this subpart at all times when the equipment identified in § 63.2338(b)(1) through (4) is in OLD operation.

(b) You must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in § 63.6(e)(1)(i).

(c) Except for emission sources not required to be controlled as specified in § 63.2343, you must develop a written startup, shutdown, and malfunction (SSM) plan according to the provisions in § 63.6(e)(3).

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42909, July 28, 2006]

Testing and Initial Compliance Requirements

§ 63.2354 What performance tests, design evaluations, and performance evaluations must I conduct?

(a)(1) For each performance test that you conduct, you must use the procedures specified in subpart SS of this part and the provisions specified in paragraph (b) of this section.

(2) For each design evaluation you conduct, you must use the procedures specified in subpart SS of this part.

(3) For each performance evaluation of a continuous emission monitoring system (CEMS) you conduct, you must follow the requirements in § 63.8(e).

(b)(1) For nonflare control devices, you must conduct each performance test according to the requirements in § 63.7(e)(1), and either § 63.988(b), § 63.990(b), or § 63.995(b), using the procedures specified in § 63.997(e).

(2) You must conduct three separate test runs for each performance test on a nonflare control device as specified in §§ 63.7(e)(3) and 63.997(e)(1)(v). Each test run must last at least 1 hour, except as provided in § 63.997(e)(1)(v)(A) and (B).

(3)(i) In addition to EPA Method 25 or 25A of 40 CFR part 60, appendix A, to determine compliance with the organic HAP or TOC emission limit, you may use EPA Method 18 of 40 CFR part 60, appendix A, as specified in paragraph (b)(3)(i) of this section. As an alternative to EPA Method 18, you may use ASTM D6420-99 (Reapproved 2004), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (incorporated by reference, see § 63.14), under the conditions specified in paragraph (b)(3)(ii) of this section.

(A) If you use EPA Method 18 to measure compliance with the percentage efficiency limit, you must first determine which organic HAP are present in the inlet gas stream (i.e., uncontrolled emissions) using knowledge of the organic liquids or the screening procedure described in EPA Method 18. In conducting the performance test, you must analyze samples collected as specified in EPA Method 18, simultaneously at the inlet and outlet of the control device. Quantify the emissions for the same organic HAP identified as present in the inlet gas stream for both the inlet and outlet gas streams of the control device.

(B) If you use EPA Method 18 of 40 CFR part 60, appendix A, to measure compliance with the emission concentration limit, you must first determine which organic HAP are present in the inlet gas stream using knowledge of the organic liquids or the screening procedure described in EPA Method 18. In conducting the performance test, analyze samples collected as specified in EPA Method 18 at the outlet of the control device. Quantify the control device outlet emission concentration for the same organic HAP identified as present in the inlet or uncontrolled gas stream.

(ii) You may use ASTM D6420-99 (Reapproved 2004), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (incorporated by reference, see § 63.14), as an alternative to EPA Method 18 if the target concentration is between 150 parts per billion by volume and 100 ppmv and either of the conditions specified in paragraph (b)(2)(ii)(A) or (B) of this section exists. For target compounds not listed in Section 1.1 of ASTM D6420-99 (Reapproved 2004) and not amenable to detection by mass spectrometry, you may not use ASTM D6420-99 (Reapproved 2004).

(A) The target compounds are those listed in Section 1.1 of ASTM D6420-99 (Reapproved 2004), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (incorporated by reference, see § 63.14),; or

(B) For target compounds not listed in Section 1.1 of ASTM D6420-99 (Reapproved 2004), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (incorporated by reference, see § 63.14), but potentially detected by mass spectrometry, the additional system continuing calibration check after each run, as detailed in ASTM D6420-99 (Reapproved 2004), Section 10.5.3, must be followed, met, documented, and submitted with the data report, even if there is no moisture condenser used or the compound is not considered water-soluble.

(4) If a principal component of the uncontrolled or inlet gas stream to the control device is formaldehyde, you may use EPA Method 316 of appendix A of this part instead of EPA Method 18 of 40 CFR part 60, appendix A, for measuring the formaldehyde. If formaldehyde is the predominant organic HAP in the inlet gas stream, you may use EPA Method 316 alone to measure formaldehyde either at the inlet and outlet of the control device using the formaldehyde control efficiency as a surrogate for total organic HAP or TOC efficiency, or at the outlet of a combustion device for determining compliance with the emission concentration limit.

(5) You may not conduct performance tests during periods of SSM, as specified in § 63.7(e)(1).

(c) To determine the HAP content of the organic liquid, you may use EPA Method 311 of 40 CFR part 63, appendix A, or other method approved by the Administrator. In addition, you may use other means, such as voluntary consensus standards, material safety data sheets (MSDS), or certified product data sheets, to determine the HAP content of the organic liquid. If the method you select to determine the HAP content provides HAP content ranges, you must use the upper end of each HAP content range in determining the total HAP content of the organic liquid. The EPA may require you to test the HAP content of an organic liquid using EPA Method 311 or other method approved by the Administrator. If the results of the EPA Method 311 (or any other approved method) are different from the HAP content determined by another means, the EPA Method 311 (or approved method) results will govern.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42909, July 28, 2006]

§ 63.2358 By what date must I conduct performance tests and other initial compliance demonstrations?

(a) You must conduct initial performance tests and design evaluations according to the schedule in § 63.7(a)(2), or by the compliance date specified in any applicable State or Federal new source review construction permit to which the affected source is already subject, whichever is earlier.

(b)(1) For storage tanks and transfer racks at existing affected sources complying with the emission limitations listed in Table 2 to this subpart, you must demonstrate initial compliance with the emission limitations within 180 days after February 5, 2007, except as provided in paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(i) For storage tanks with an existing internal or external floating roof, complying with item 1.a.ii. in Table 2 to this subpart and item 1.a. in Table 4 to this subpart, you must conduct your initial compliance demonstration the next time the storage tank is emptied and degassed, but not later than February 3, 2014.

(ii) For storage tanks complying with item 1.a.ii. or 6.a.ii in Table 2 of this subpart and item 1.b., 1.c., or 2. in Table 4 of this subpart, you must comply within 180 days after April 25, 2011.

(2) For storage tanks and transfer racks at reconstructed or new affected sources complying with the emission limitations listed in Table 2 to this subpart, you must conduct your initial compliance demonstration with the emission limitations within 180 days after the initial startup date for the affected source or February 3, 2004, whichever is later.

(c)(1) For storage tanks at existing affected sources complying with the work practice standard in Table 4 to this subpart, you must conduct your initial compliance demonstration as specified in paragraphs (c)(1)(i) and (c)(1)(ii) of this section.

(i) For storage tanks with an existing internal or external floating roof, complying with item 1.a. in Table 4 of this subpart, you must conduct your initial compliance demonstration the next time the storage tank is emptied and degassed, but not later than February 3, 2014.

(ii) For other storage tanks not specified in paragraph (c)(1)(i) of this section, you must comply within 180 days after April 25, 2011.

(2) For transfer racks and equipment leak components at existing affected sources complying with the work practice standards in Table 4 to this subpart, you must conduct your initial compliance demonstration within 180 days after February 5, 2007.

(d) For storage tanks, transfer racks, and equipment leak components at reconstructed or new affected sources complying with the work practice standards in Table 4 to this subpart, you must conduct your initial compliance demonstration within 180 days after the initial startup date for the affected source.

[69 FR 5063, Feb. 3, 2004, as amended at 73 FR 40981, July 17, 2008]

§ 63.2362 When must I conduct subsequent performance tests?

(a) For nonflare control devices, you must conduct subsequent performance testing required in Table 5 to this subpart, item 1, at any time the EPA requests you to in accordance with section 114 of the CAA.

(b)(1) For each transport vehicle that you own that is equipped with vapor collection equipment and that is loaded with organic liquids at a transfer rack that is subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, you must perform the vapor tightness testing required in Table 5 to this subpart, item 2, on that transport vehicle at least once per year.

(2) For transport vehicles that you own that do not have vapor collection equipment, you must maintain current certification in accordance with the U.S. DOT pressure test requirements in 49 CFR part 180 for cargo tanks or 49 CFR 173.31 for tank cars.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42910, July 28, 2006]

§ 63.2366 What are my monitoring installation, operation, and maintenance requirements?

(a) You must install, operate, and maintain a CMS on each control device required in order to comply with this subpart. If you use a continuous parameter monitoring system (CPMS) (as defined in § 63.981), you must comply with the applicable requirements for CPMS in subpart SS of this part for the control device being used. If you use a continuous emissions monitoring system (CEMS), you must comply with the requirements in § 63.8.

(b) For nonflare control devices controlling storage tanks and low throughput transfer racks, you must submit a monitoring plan according to the requirements in subpart SS of this part for monitoring plans.

§ 63.2370 How do I demonstrate initial compliance with the emission limitations, operating limits, and work practice standards?

(a) You must demonstrate initial compliance with each emission limitation and work practice standard that applies to you as specified in tables 6 and 7 to this subpart.

(b) You demonstrate initial compliance with the operating limits requirements specified in § 63.2346(e) by establishing the operating limits during the initial performance test or design evaluation.

(c) You must submit the results of the initial compliance determination in the Notification of Compliance Status according to the requirements in § 63.2382(d).

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42910, July 28, 2006]

Continuous Compliance Requirements

§ 63.2374 When do I monitor and collect data to demonstrate continuous compliance and how do I use the collected data?

(a) You must monitor and collect data according to subpart SS of this part and paragraphs (b) and (c) of this section.

(b) When using a control device to comply with this subpart, you must monitor continuously or collect data at all required intervals at all times that the emission source and control device are in OLD operation, except for CMS malfunctions (including any malfunction preventing the CMS from operating properly), associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments).

(c) Do not use data recorded during CMS malfunctions, associated repairs, required quality assurance or control activities, or periods when emissions from organic liquids are not routed to the control device in data averages and calculations used to report emission or operating levels. Do not use such data in fulfilling a minimum data availability requirement, if applicable. You must use all of the data collected during all other periods, including periods of SSM, in assessing the operation of the control device.

§ 63.2378 How do I demonstrate continuous compliance with the emission limitations, operating limits, and work practice standards?

(a) You must demonstrate continuous compliance with each emission limitation, operating limit, and work practice standard in Tables 2 through 4 to this subpart that applies to you according to the methods specified in subpart SS of this part and in tables 8 through 10 to this subpart, as applicable.

(b) You must follow the requirements in § 63.6(e)(1) and (3) during periods of startup, shutdown, malfunction, or nonoperation of the affected source or any part thereof. In addition, the provisions of paragraphs (b)(1) through (3) of this section apply.

(1) The emission limitations in this subpart apply at all times except during periods of nonoperation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies. The emission limitations of this subpart apply during periods of SSM, except as provided in paragraphs (b)(2) and (3) of this section. However, if a SSM, or period of nonoperation of one portion of the affected source does not affect the ability of a particular emission source to comply with the emission limitations to which it is subject, then that emission source is still required to comply with the applicable emission limitations of this subpart during the startup, shutdown, malfunction, or period of nonoperation.

(2) The owner or operator must not shut down control devices or monitoring systems that are required or utilized for achieving compliance with this subpart during periods of SSM while emissions are being routed to such items of equipment if the shutdown would contravene requirements of this subpart applicable to such items of equipment. This paragraph (b)(2) does not apply if the item of equipment is malfunctioning. This paragraph (b)(2) also does not apply if the owner or operator shuts down the compliance equipment (other than monitoring systems) to avoid damage due to a contemporaneous SSM of the affected source or portion thereof. If the owner or operator has reason to believe that monitoring equipment would be damaged due to a contemporaneous SSM of the affected source of portion thereof, the owner or operator must provide documentation supporting such a claim in the next Compliance report required in table 11 to this subpart, item 1. Once approved by the Administrator, the provision for ceasing to collect, during a SSM, monitoring data that would otherwise be required by the provisions of this subpart must be incorporated into the SSM plan.

(3) During SSM, you must implement, to the extent reasonably available, measures to prevent or minimize excess emissions. For purposes of this paragraph (b)(3), the term “excess emissions” means emissions greater than those allowed by the emission limits that apply during normal operational periods. The measures to be taken must be

identified in the SSM plan, and may include, but are not limited to, air pollution control technologies, recovery technologies, work practices, pollution prevention, monitoring, and/or changes in the manner of operation of the affected source. Back-up control devices are not required, but may be used if available.

(c) Periods of planned routine maintenance of a control device used to control storage tanks or transfer racks, during which the control device does not meet the emission limits in table 2 to this subpart, must not exceed 240 hours per year.

(d) If you elect to route emissions from storage tanks or transfer racks to a fuel gas system or to a process, as allowed by § 63.982(d), to comply with the emission limits in table 2 to this subpart, the total aggregate amount of time during which the emissions bypass the fuel gas system or process during the calendar year without being routed to a control device, for all reasons (except SSM or product changeovers of flexible operation units and periods when a storage tank has been emptied and degassed), must not exceed 240 hours.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 20463, Apr. 20, 2006]

Notifications, Reports, and Records

§ 63.2382 What notifications must I submit and when and what information should be submitted?

(a) You must submit each notification in subpart SS of this part, table 12 to this subpart, and paragraphs (b) through (d) of this section that applies to you. You must submit these notifications according to the schedule in table 12 to this subpart and as specified in paragraphs (b) through (d) of this section.

(b)(1) *Initial Notification.* If you startup your affected source before February 3, 2004, you must submit the Initial Notification no later than 120 calendar days after February 3, 2004.

(2) If you startup your new or reconstructed affected source on or after February 3, 2004, you must submit the Initial Notification no later than 120 days after initial startup.

(c) If you are required to conduct a performance test, you must submit the Notification of Intent to conduct the test at least 60 calendar days before it is initially scheduled to begin as required in § 63.7(b)(1).

(d)(1) *Notification of Compliance Status.* If you are required to conduct a performance test, design evaluation, or other initial compliance demonstration as specified in table 5, 6, or 7 to this subpart, you must submit a Notification of Compliance Status.

(2) The Notification of Compliance Status must include the information required in § 63.999(b) and in paragraphs (d)(2)(i) through (viii) of this section.

(i) The results of any applicability determinations, emission calculations, or analyses used to identify and quantify organic HAP emissions from the affected source.

(ii) The results of emissions profiles, performance tests, engineering analyses, design evaluations, flare compliance assessments, inspections and repairs, and calculations used to demonstrate initial compliance according to tables 6 and 7 to this subpart. For performance tests, results must include descriptions of sampling and analysis procedures and quality assurance procedures.

(iii) Descriptions of monitoring devices, monitoring frequencies, and the operating limits established during the initial compliance demonstrations, including data and calculations to support the levels you establish.

(iv) Descriptions of worst-case operating and/or testing conditions for the control device(s).

(v) Identification of emission sources subject to overlapping requirements described in § 63.2396 and the authority under which you will comply.

(vi) The applicable information specified in § 63.1039(a)(1) through (3) for all pumps and valves subject to the work practice standards for equipment leak components in table 4 to this subpart, item 4.

(vii) If you are complying with the vapor balancing work practice standard for transfer racks according to table 4 to this subpart, item 3.a, include a statement to that effect and a statement that the pressure vent settings on the affected storage tanks are greater than or equal to 2.5 psig.

(viii) The information specified in § 63.2386(c)(10)(i), unless the information has already been submitted with the first Compliance report. If the information specified in § 63.2386(c)(10)(i) has already been submitted with the first Compliance report, the information specified in § 63.2386(d)(3) and (4), as applicable, shall be submitted instead.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42910, July 28, 2006]

§ 63.2386 What reports must I submit and when and what information is to be submitted in each?

(a) You must submit each report in subpart SS of this part, Table 11 to this subpart, table 12 to this subpart, and in paragraphs (c) through (e) of this section 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 according to table 11 to this subpart and by the dates shown in paragraphs (b)(1) through (3) of this section, by the dates shown in subpart SS of this part, and by the dates shown in table 12 to this subpart, whichever are applicable.

(1)(i) The first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.2342 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 affected source in § 63.2342.

(ii) The first Compliance report must be postmarked 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 § 63.2342.

(2)(i) 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.

(ii) Each subsequent Compliance report must be postmarked no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(3) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, 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) and (2) of this section.

(c) *First Compliance report.* The first Compliance report must contain the information specified in paragraphs (c)(1) through (10) of this section.

(1) Company name and address.

(2) Statement by a responsible official, including the official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

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

(4) Any changes to the information listed in § 63.2382(d)(2) that have occurred since the submittal of the Notification of Compliance Status.

(5) If you had a SSM during the reporting period and you took actions consistent with your SSM plan, the Compliance report must include the information described in § 63.10(d)(5)(i).

(6) If there are no deviations from any emission limitation or operating limit that applies to you and there are no deviations from the requirements for work practice standards, a statement that there were no deviations from the emission limitations, operating limits, or work practice standards during the reporting period.

(7) If there were no periods during which the CMS 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.

(8) For closed vent systems and control devices used to control emissions, the information specified in paragraphs (c)(8)(i) and (ii) of this section for those planned routine maintenance activities that would require the control device to not meet the applicable emission limit.

(i) A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6 months. This description must include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.

(ii) A description of the planned routine maintenance that was performed for the control device during the previous 6 months. This description must include the type of maintenance performed and the total number of hours during those 6 months that the control device did not meet the applicable emission limit due to planned routine maintenance.

(9) A listing of all transport vehicles into which organic liquids were loaded at transfer racks that are subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10, during the previous 6 months for which vapor tightness documentation as required in § 63.2390(c) was not on file at the facility.

(10)(i) A listing of all transfer racks (except those racks at which only unloading of organic liquids occurs) and of tanks greater than or equal to 18.9 cubic meters (5,000 gallons) that are part of the affected source but are not subject to any of the emission limitations, operating limits, or work practice standards of this subpart.

(ii) If the information specified in paragraph (c)(10)(i) of this section has already been submitted with the Notification of Compliance Status, the information specified in paragraphs (d)(3) and (4) of this section, as applicable, shall be submitted instead.

(d) *Subsequent Compliance reports* . Subsequent Compliance reports must contain the information in paragraphs (c)(1) through (9) of this section and, where applicable, the information in paragraphs (d)(1) through (4) of this section.

(1) For each deviation from an emission limitation occurring at an affected source where you are using a CMS to comply with an emission limitation in this subpart, you must include in the Compliance report the applicable information in paragraphs (d)(1)(i) through (xii) of this section. This includes periods of SSM.

(i) The date and time that each malfunction started and stopped.

(ii) The dates and times that each CMS was inoperative, except for zero (low-level) and high-level checks.

(iii) For each CMS that was out of control, the information in § 63.8(c)(8).

(iv) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of SSM, or during another period.

(v) A summary of the total duration of the deviations during the reporting period, and the total duration as a percentage of the total emission source operating time during that reporting period.

(vi) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(vii) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percentage of the total emission source operating time during that reporting period.

(viii) An identification of each organic HAP that was potentially emitted during each deviation based on the known organic HAP contained in the liquid(s).

(ix) A brief description of the emission source(s) at which the CMS deviation(s) occurred.

(x) A brief description of each CMS that was out of control during the period.

(xi) The date of the latest certification or audit for each CMS.

(xii) A brief description of any changes in CMS, processes, or controls since the last reporting period.

(2) Include in the Compliance report the information in paragraphs (d)(2)(i) through (iii) of this section, as applicable.

(i) For each storage tank and transfer rack subject to control requirements, include periods of planned routine maintenance during which the control device did not comply with the applicable emission limits in table 2 to this subpart.

(ii) For each storage tank controlled with a floating roof, include a copy of the inspection record (required in § 63.1065(b)) when inspection failures occur.

(iii) If you elect to use an extension for a floating roof inspection in accordance with § 63.1063(c)(2)(iv)(B) or (e)(2), include the documentation required by those paragraphs.

(3)(i) A listing of any storage tank that became subject to controls based on the criteria for control specified in table 2 to this subpart, items 1 through 6, since the filing of the last Compliance report.

(ii) A listing of any transfer rack that became subject to controls based on the criteria for control specified in table 2 to this subpart, items 7 through 10, since the filing of the last Compliance report.

(4)(i) A listing of tanks greater than or equal to 18.9 cubic meters (5,000 gallons) that became part of the affected source but are not subject to any of the emission limitations, operating limits, or work practice standards of this subpart, since the last Compliance report.

(ii) A listing of all transfer racks (except those racks at which only the unloading of organic liquids occurs) that became part of the affected source but are not subject to any of the emission limitations, operating limits, or work practice standards of this subpart, since the last Compliance report.

(e) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 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 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to table 11 to this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission limitation in this subpart, we will consider submission of the Compliance report as satisfying any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report will not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the applicable title V permitting authority.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42910, July 28, 2006]

§ 63.2390 What records must I keep?

(a) For each emission source identified in § 63.2338 that does not require control under this subpart, you must keep all records identified in § 63.2343.

(b) For each emission source identified in § 63.2338 that does require control under this subpart:

(1) You must keep all records identified in subpart SS of this part and in table 12 to this subpart that are applicable, including records related to notifications and reports, SSM, performance tests, CMS, and performance evaluation plans; and

(2) You must keep the records required to show continuous compliance, as required in subpart SS of this part and in tables 8 through 10 to this subpart, with each emission limitation, operating limit, and work practice standard that applies to you.

(c) For each transport vehicle into which organic liquids are loaded at a transfer rack that is subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10, you must keep the applicable records in paragraphs (c)(1) and (2) of this section or alternatively the verification records in paragraph (c)(3) of this section.

(1) For transport vehicles equipped with vapor collection equipment, the documentation described in 40 CFR 60.505(b), except that the test title is: Transport Vehicle Pressure Test-EPA Reference Method 27.

(2) For transport vehicles without vapor collection equipment, current certification in accordance with the U.S. DOT pressure test requirements in 49 CFR part 180 for cargo tanks or 49 CFR 173.31 for tank cars.

(3) In lieu of keeping the records specified in paragraph (c)(1) or (2) of this section, as applicable, the owner or operator shall record that the verification of U.S. DOT tank certification or Method 27 of appendix A to 40 CFR part 60 testing, required in table 5 to this subpart, item 2, has been performed. Various methods for the record of verification can be used, such as: A check-off on a log sheet, a list of U.S. DOT serial numbers or Method 27 data, or a position description for gate security showing that the security guard will not allow any trucks on site that do not have the appropriate documentation.

(d) You must keep records of the total actual annual facility-level organic liquid loading volume as defined in § 63.2406 through transfer racks to document the applicability, or lack thereof, of the emission limitations in table 2 to this subpart, items 7 through 10.

(e) An owner or operator who elects to comply with § 63.2346(a)(4) shall keep the records specified in paragraphs (e)(1) through (3) of this section.

(1) A record of the U.S. DOT certification required by § 63.2346(a)(4)(ii).

(2) A record of the pressure relief vent setting specified in § 63.2346(a)(4)(v).

(3) If complying with § 63.2346(a)(4)(vi)(B), keep the records specified in paragraphs (e)(3)(i) and (ii) of this section.

(i) A record of the equipment to be used and the procedures to be followed when reloading the cargo tank or tank car and displacing vapors to the storage tank from which the liquid originates.

(ii) A record of each time the vapor balancing system is used to comply with § 63.2346(a)(4)(vi)(B).

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42910, July 28, 2006; 73 FR 40982, July 17, 2008]

§ 63.2394 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 inspection and review according to § 63.10(b)(1), including records stored in electronic form at a separate location.

(b) As specified in § 63.10(b)(1), you must keep your files of all information (including all reports and notifications) for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1). You may keep the records off site for the remaining 3 years.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42911, July 28, 2006]

Other Requirements and Information

§ 63.2396 What compliance options do I have if part of my plant is subject to both this subpart and another subpart?

(a) *Compliance with other regulations for storage tanks* . (1) After the compliance dates specified in § 63.2342, you are in compliance with the provisions of this subpart for any storage tank that is assigned to the OLD affected source and that is both controlled with a floating roof and is in compliance with the provisions of either 40 CFR part 60, subpart Kb, or 40 CFR part 61, subpart Y, except that records shall be kept for 5 years rather than 2 years for storage tanks that are assigned to the OLD affected source.

(2) After the compliance dates specified in § 63.2342, you are in compliance with the provisions of this subpart for any storage tank with a fixed roof that is assigned to the OLD affected source and that is both controlled with a closed vent system and control device and is in compliance with either 40 CFR part 60, subpart Kb, or 40 CFR part 61, subpart Y, except that you must comply with the monitoring, recordkeeping, and reporting requirements in this subpart.

(3) As an alternative to paragraphs (a)(1) and (2) of this section, if a storage tank assigned to the OLD affected source is subject to control under 40 CFR part 60, subpart Kb, or 40 CFR part 61, subpart Y, you may elect to comply only with the requirements of this subpart for storage tanks meeting the applicability criteria for control in table 2 to this subpart.

(b) *Compliance with other regulations for transfer racks* . After the compliance dates specified in § 63.2342, if you have a transfer rack that is subject to 40 CFR part 61, subpart BB, and that transfer rack is in OLD operation, you must meet all of the requirements of this subpart for that transfer rack when the transfer rack is in OLD operation during the loading of organic liquids.

(c) *Compliance with other regulations for equipment leak components.* (1) After the compliance dates specified in § 63.2342, if you have pumps, valves, or sampling connections that are subject to a 40 CFR part 60 subpart, and those pumps, valves, and sampling connections are in OLD operation and in organic liquids service, as defined in this subpart, you must comply with the provisions of each subpart for those equipment leak components.

(2) After the compliance dates specified in § 63.2342, if you have pumps, valves, or sampling connections subject to 40 CFR part 63, subpart GGG, and those pumps, valves, and sampling connections are in OLD operation and in organic liquids service, as defined in this subpart, you may elect to comply with the provisions of this subpart for all such equipment leak components. You must identify in the Notification of Compliance Status required by § 63.2382(b) the provisions with which you will comply.

(d) [Reserved]

(e) *Overlap with other regulations for monitoring, recordkeeping, and reporting* —(1) *Control devices* . After the compliance dates specified in § 63.2342, if any control device subject to this subpart is also subject to monitoring, recordkeeping, and reporting requirements of another 40 CFR part 63 subpart, the owner or operator must be in compliance with the monitoring, recordkeeping, and reporting requirements of this subpart EEEE. If complying with the monitoring, recordkeeping, and reporting requirements of the other subpart satisfies the monitoring, recordkeeping, and reporting requirements of this subpart, the owner or operator may elect to continue to comply with the monitoring, recordkeeping, and reporting requirements of the other subpart. In such instances, the owner or operator will be deemed to be in compliance with the monitoring, recordkeeping, and reporting requirements of this subpart. The owner or operator must identify the other subpart being complied with in the Notification of Compliance Status required by § 63.2382(b).

(2) *Equipment leak components* . After the compliance dates specified in § 63.2342, if you are applying the applicable recordkeeping and reporting requirements of another 40 CFR part 63 subpart to the valves, pumps, and sampling connection systems associated with a transfer rack subject to this subpart that only unloads organic liquids directly to or via pipeline to a non-tank process unit component or to a storage tank subject to the other 40 CFR part 63 subpart, the owner or operator must be in compliance with the recordkeeping and reporting requirements of this subpart EEEE. If complying with the recordkeeping and reporting requirements of the other subpart satisfies the recordkeeping and reporting requirements of this subpart, the owner or operator may elect to continue to comply with the recordkeeping and reporting requirements of the other subpart. In such instances, the owner or operator will be deemed to be in compliance with the recordkeeping and reporting requirements of this subpart. The owner or operator must identify the other subpart being complied with in the Notification of Compliance Status required by § 63.2382(b).

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42911, July 28, 2006]

§ 63.2398 What parts of the General Provisions apply to me?

Table 12 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

§ 63.2402 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (U.S. EPA) or a delegated authority such as your State, local, or eligible tribal agency. If the EPA Administrator has delegated authority to your State, local, or eligible tribal agency, then that agency, as well as the EPA, has the authority to implement and enforce this subpart. You should contact your EPA Regional Office (see list in § 63.13) to find out if this subpart is delegated to your State, local, or eligible tribal agency.

(b) In delegating implementation and enforcement authority for this subpart to a State, local, or eligible tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraphs (b)(1) through (4) of this section are retained by the EPA Administrator and are not delegated to the State, local, or eligible tribal agency.

(1) Approval of alternatives to the nonopacity emission limitations, operating limits, and work practice standards in § 63.2346(a) through (c) under § 63.6(g).

(2) Approval of major changes to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(3) Approval of major changes to monitoring under § 63.8(f) and as defined in § 63.90.

(4) Approval of major changes to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42911, July 28, 2006]

§ 63.2406 What definitions apply to this subpart?

Terms used in this subpart are defined in the CAA, in § 63.2, 40 CFR part 63, subparts H, PP, SS, TT, UU, and WW, and in this section. If the same term is defined in another subpart and in this section, it will have the meaning given in this section for purposes of this subpart. Notwithstanding the introductory language in § 63.921, the terms “container” and “safety device” shall have the meaning found in this subpart and not in § 63.921.

Actual annual average temperature, for organic liquids, means the temperature determined using the following methods:

(1) For heated or cooled storage tanks, use the calculated annual average temperature of the stored organic liquid as determined from a design analysis of the storage tank.

(2) For ambient temperature storage tanks:

(i) Use the annual average of the local (nearest) normal daily mean temperatures reported by the National Climatic Data Center; or

(ii) Use any other method that the EPA approves.

Annual average true vapor pressure means the equilibrium partial pressure exerted by the total table 1 organic HAP in the stored or transferred organic liquid. For the purpose of determining if a liquid meets the definition of an organic liquid, the vapor pressure is determined using standard conditions of 77 degrees F and 29.92 inches of mercury. For the purpose of determining whether an organic liquid meets the applicability criteria in table 2, items 1 through 6, to this subpart, use the actual annual average temperature as defined in this subpart. The vapor pressure value in either of these cases is determined:

(1) In accordance with methods described in American Petroleum Institute Publication 2517, Evaporative Loss from External Floating-Roof Tanks (incorporated by reference, see § 63.14);

(2) Using standard reference texts;

(3) By the American Society for Testing and Materials Method D2879-83, 96 (incorporated by reference, see § 63.14); or

(4) Using any other method that the EPA approves.

Bottoms receiver means a tank that collects distillation bottoms before the stream is sent for storage or for further processing downstream.

Cargo tank means a liquid-carrying tank permanently attached and forming an integral part of a motor vehicle or truck trailer. This term also refers to the entire cargo tank motor vehicle or trailer. For the purpose of this subpart, vacuum trucks used exclusively for maintenance or spill response are not considered cargo tanks.

Closed vent system means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow-inducing devices that transport gas or vapors from an emission point to a control device. This system does not include the vapor collection system that is part of some transport vehicles or the loading arm or hose that is used for vapor return. For transfer racks, the closed vent system begins at, and includes, the first block valve on the downstream side of the loading arm or hose used to convey displaced vapors.

Combustion device means an individual unit of equipment, such as a flare, oxidizer, catalytic oxidizer, process heater, or boiler, used for the combustion of organic emissions.

Container means a portable unit in which a material can be stored, transported, treated, disposed of, or otherwise handled. Examples of containers include, but are not limited to, drums and portable cargo containers known as “portable tanks” or “totes.”

Control device means any combustion device, recovery device, recapture device, or any combination of these devices used to comply with this subpart. Such equipment or devices include, but are not limited to, absorbers, adsorbers, condensers, and combustion devices. Primary condensers, steam strippers, and fuel gas systems are not considered control devices.

Crude oil means any of the naturally occurring liquids commonly referred to as crude oil, regardless of specific physical properties. Only those crude oils downstream of the first point of custody transfer after the production field are considered crude oils in this subpart.

Custody transfer means the transfer of hydrocarbon liquids after processing and/or treatment in the producing operations, or from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.

Design evaluation means a procedure for evaluating control devices that complies with the requirements in § 63.985(b)(1)(i).

Deviation means any instance in which an affected source subject to this subpart, or portion thereof, 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 (including any operating limit) or work practice standard;

(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 (including any operating limit) or work practice standard in this subpart during SSM.

Emission limitation means an emission limit, opacity limit, operating limit, or visible emission limit.

Equipment leak component means each pump, valve, and sampling connection system used in organic liquids service at an OLD operation. Valve types include control, globe, gate, plug, and ball. Relief and check valves are excluded.

Gasoline means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals (4.0 pounds per square inch absolute (psia)) or greater which is used as a fuel for internal combustion engines. Aviation gasoline is included in this definition.

High throughput transfer rack means those transfer racks that transfer into transport vehicles (for existing affected sources) or into transport vehicles and containers (for new affected sources) a total of 11.8 million liters per year or greater of organic liquids.

In organic liquids service means that an equipment leak component contains or contacts organic liquids having 5 percent by weight or greater of the organic HAP listed in Table 1 to this subpart.

Low throughput transfer rack means those transfer racks that transfer into transport vehicles (for existing affected sources) or into transport vehicles and containers (for new affected sources) less than 11.8 million liters per year of organic liquids.

On-site or *on site* means, with respect to records required to be maintained by this subpart or required by another subpart referenced by this subpart, that records are stored at a location within a major source which encompasses the affected source. On-site includes, but is not limited to, storage at the affected source to which the records pertain, storage in central files elsewhere at the major source, or electronically available at the site.

Organic liquid means:

(1) Any non-crude oil liquid or liquid mixture that contains 5 percent by weight or greater of the organic HAP listed in Table 1 to this subpart, as determined using the procedures specified in § 63.2354(c).

(2) Any crude oils downstream of the first point of custody transfer.

(3) Organic liquids for purposes of this subpart do not include the following liquids:

(i) Gasoline (including aviation gasoline), kerosene (No. 1 distillate oil), diesel (No. 2 distillate oil), asphalt, and heavier distillate oils and fuel oils;

(ii) Any fuel consumed or dispensed on the plant site directly to users (such as fuels for fleet refueling or for refueling marine vessels that support the operation of the plant);

(iii) Hazardous waste;

(iv) Wastewater;

(v) Ballast water: or

(vi) Any non-crude oil liquid with an annual average true vapor pressure less than 0.7 kilopascals (0.1 psia).

Organic liquids distribution (OLD) operation means the combination of activities and equipment used to store or transfer organic liquids into, out of, or within a plant site regardless of the specific activity being performed. Activities include, but are not limited to, storage, transfer, blending, compounding, and packaging.

Permitting authority means one of the following:

(1) The State Air Pollution Control Agency, local agency, or other agency authorized by the EPA Administrator to carry out a permit program under 40 CFR part 70; or

(2) The EPA Administrator, in the case of EPA-implemented permit programs under title V of the CAA (42 U.S.C. 7661) and 40 CFR part 71.

Plant site means all contiguous or adjoining surface property that is under common control, including surface properties that are separated only by a road or other public right-of-way. Common control includes surface properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, or any combination.

Research and development facility means laboratory and pilot plant operations whose primary purpose is to conduct research and development into new processes and products, where the operations are under the close supervision of technically trained personnel, and which are not engaged in the manufacture of products for commercial sale, except in a *de minimis* manner.

Responsible official means responsible official as defined in 40 CFR 70.2 and 40 CFR 71.2, as applicable.

Safety device means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device that functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event.

Shutdown means the cessation of operation of an OLD affected source, or portion thereof (other than as part of normal operation of a batch-type operation), including equipment required or used to comply with this subpart, or the emptying and degassing of a storage tank. Shutdown as defined here includes, but is not limited to, events that result from periodic maintenance, replacement of equipment, or repair.

Startup means the setting in operation of an OLD affected source, or portion thereof (other than as part of normal operation of a batch-type operation), for any purpose. Startup also includes the placing in operation of any individual piece of equipment required or used to comply with this subpart including, but not limited to, control devices and monitors.

Storage tank means a stationary unit that is constructed primarily of nonearthen materials (such as wood, concrete, steel, or reinforced plastic) that provide structural support and is designed to hold a bulk quantity of liquid. Storage tanks do not include:

(1) Units permanently attached to conveyances such as trucks, trailers, rail cars, barges, or ships;

(2) Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere;

(3) Bottoms receivers;

(4) Surge control vessels;

(5) Vessels storing wastewater; or

(6) Reactor vessels associated with a manufacturing process unit.

Surge control vessel means feed drums, recycle drums, and intermediate vessels. Surge control vessels are used within chemical manufacturing processes when in-process storage, mixing, or management of flow rates or volumes is needed to assist in production of a product.

Tank car means a car designed to carry liquid freight by rail, and including a permanently attached tank.

Total actual annual facility-level organic liquid loading volume means the total facility-level actual volume of organic liquid loaded for transport within or out of the facility through transfer racks that are part of the affected source into transport vehicles (for existing affected sources) or into transport vehicles and containers (for new affected sources) based on a 3-year rolling average, calculated annually.

(1) For existing affected sources, each 3-year rolling average is based on actual facility-level loading volume during each calendar year (January 1 through December 31) in the 3-year period. For calendar year 2004 only (the first year of the initial 3-year rolling average), if an owner or operator of an affected source does not have actual loading volume data for the time period from January 1, 2004, through February 2, 2004 (the time period prior to the effective date of the OLD NESHAP), the owner or operator shall compute a facility-level loading volume for this time period as follows: At the end of the 2004 calendar year, the owner or operator shall calculate a daily average facility-level loading volume (based on the actual loading volume for February 3, 2004, through December 31, 2004) and use that daily average to estimate the facility-level loading volume for the period of time from January 1, 2004, through February 2, 2004. The owner or operator shall then sum the estimated facility-level loading volume from January 1, 2004, through February 2, 2004, and the actual facility-level loading volume from February 3, 2004, through December 31, 2004, to calculate the annual facility-level loading volume for calendar year 2004.

(2)(i) For new affected sources, the 3-year rolling average is calculated as an average of three 12-month periods. An owner or operator must select as the beginning calculation date with which to start the calculations as either the initial startup date of the new affected source or the first day of the calendar month following the month in which startup occurs. Once selected, the date with which the calculations begin cannot be changed.

(ii) The initial 3-year rolling average is based on the projected maximum facility-level annual loading volume for each of the 3 years following the selected beginning calculation date. The second 3-year rolling average is based on actual facility-level loading volume for the first year of operation plus a new projected maximum facility-level annual loading volume for second and third years following the selected beginning calculation date. The third 3-year rolling average is based on actual facility-level loading volume for the first 2 years of operation plus a new projected maximum annual facility-level loading volume for the third year following the beginning calculation date. Subsequent 3-year rolling averages are based on actual facility-level loading volume for each year in the 3-year rolling average.

Transfer rack means a single system used to load organic liquids into, or unload organic liquids out of, transport vehicles or containers. It includes all loading and unloading arms, pumps, meters, shutoff valves, relief valves, and other piping and equipment necessary for the transfer operation. Transfer equipment and operations that are physically separate (i.e., do not share common piping, valves, and other equipment) are considered to be separate transfer racks.

Transport vehicle means a cargo tank or tank car.

Vapor balancing system means:

(1) A piping system that collects organic HAP vapors displaced from transport vehicles or containers during loading and routes the collected vapors to the storage tank from which the liquid being loaded originated or to another storage tank connected to a common header. For containers, the piping system must route the displaced vapors directly to the appropriate storage tank or to another storage tank connected to a common header in order to qualify as a vapor balancing system; or

(2) A piping system that collects organic HAP vapors displaced from the loading of a storage tank and routes the collected vapors to the transport vehicle from which the storage tank is filled.

Vapor collection system means any equipment located at the source (i.e., at the OLD operation) that is not open to the atmosphere; that is composed of piping, connections, and, if necessary, flow-inducing devices; and that is used for:

(1) Containing and conveying vapors displaced during the loading of transport vehicles to a control device;

(2) Containing and directly conveying vapors displaced during the loading of containers; or

(3) Vapor balancing. This does not include any of the vapor collection equipment that is installed on the transport vehicle.

Vapor-tight transport vehicle means a transport vehicle that has been demonstrated to be vapor-tight. To be considered vapor-tight, a transport vehicle equipped with vapor collection equipment must undergo a pressure change of no more than 250 pascals (1 inch of water) within 5 minutes after it is pressurized to 4,500 pascals (18 inches of water). This capability must be demonstrated annually using the procedures specified in EPA Method 27 of 40 CFR part 60, appendix A. For all other transport vehicles, vapor tightness is demonstrated by performing the U.S. DOT pressure test procedures for tank cars and cargo tanks.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the CAA.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42911, July 28, 2006]

Table 1 to Subpart EEEE of Part 63—Organic Hazardous Air Pollutants

You must use the organic HAP information listed in the following table to determine which of the liquids handled at your facility meet the HAP content criteria in the definition of Organic Liquid in § 63.2406.

Compound name	CAS No.[1]
2,4-D salts and esters	94-75-7
Acetaldehyde	75-07-0
Acetonitrile	75-05-8
Acetophenone	98-86-2
Acrolein	107-02-8
Acrylamide	79-06-1
Acrylic acid	79-10-7
Acrylonitrile	107-13-1
Allyl chloride	107-05-1
Aniline	62-53-3
Benzene	71-43-2
Biphenyl	92-52-4
Butadiene (1,3-)	106-99-0
Carbon tetrachloride	56-23-5
Chloroacetic acid	79-11-8
Chlorobenzene	108-90-7
2-Chloro-1,3-butadiene (Chloroprene)	126-99-8
Chloroform	67-66-3
m-Cresol	108-39-4
o-Cresol	95-48-7
p-Cresol	106-44-5
Cresols/cresylic acid	1319-77-3

Compound name	CAS No.[1]
Cumene	98-82-8
Dibenzofurans	132-64-9
Dibutylphthalate	84-74-2
Dichloroethane (1,2-) (Ethylene dichloride) (EDC)	107-06-2
Dichloropropene (1,3-)	542-75-6
Diethanolamine	111-42-2
Diethyl aniline (N,N-)	121-69-7
Diethylene glycol monobutyl ether	112-34-5
Diethylene glycol monomethyl ether	111-77-3
Diethyl sulfate	64-67-5
Dimethyl formamide	68-12-2
Dimethylhydrazine (1,1-)	57-14-7
Dioxane (1,4-) (1,4-Diethyleneoxide)	123-91-1
Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106-89-8
Epoxybutane (1,2-)	106-88-7
Ethyl acrylate	140-88-5
Ethylbenzene	100-41-4
Ethyl chloride (Chloroethane)	75-00-3
Ethylene dibromide (Dibromomethane)	106-93-4
Ethylene glycol	107-21-1
Ethylene glycol dimethyl ether	110-71-4
Ethylene glycol monomethyl ether	109-86-4
Ethylene glycol monomethyl ether acetate	110-49-6
Ethylene glycol monophenyl ether	122-99-6
Ethylene oxide	75-21-8
Ethylidene dichloride (1,1-Dichloroethane)	75-34-3
Formaldehyde	50-00-0
Hexachloroethane	67-72-1
Hexane	110-54-3
Hydroquinone	123-31-9
Isophorone	78-59-1
Maleic anhydride	108-31-6
Methanol	67-56-1
Methyl chloride (Chloromethane)	74-87-3
Methylene chloride (Dichloromethane)	75-09-2
Methylenedianiline (4,4′-)	101-77-9
Methylene diphenyl diisocyanate	101-68-8
Methyl hydrazine	60-34-4
Methyl isobutyl ketone (Hexone) (MIBK)	108-10-1
Methyl methacrylate	80-62-6
Methyl tert-butyl ether (MTBE)	1634-04-4
Naphthalene	91-20-3
Nitrobenzene	98-95-3
Phenol	108-9-52

Compound name	CAS No.[1]
Phthalic anhydride	85-44-9
Polycyclic organic matter	50-32-8
Propionaldehyde	123-38-6
Propylene dichloride (1,2-Dichloropropane)	78-87-5
Propylene oxide	75-56-9
Quinoline	91-22-5
Styrene	100-42-5
Styrene oxide	96-09-3
Tetrachloroethane (1,1,2,2-)	79-34-5
Tetrachloroethylene (Perchloroethylene)	127-18-4
Toluene	108-88-3
Toluene diisocyanate (2,4-)	584-84-9
o-Toluidine	95-53-4
Trichlorobenzene (1,2,4-)	120-82-1
Trichloroethane (1,1,1-) (Methyl chloroform)	71-55-6
Trichloroethane (1,1,2-) (Vinyl trichloride)	79-00-5
Trichloroethylene	79-01-6
Triethylamine	121-44-8
Trimethylpentane (2,2,4-)	540-84-1
Vinyl acetate	108-05-4
Vinyl chloride (Chloroethylene)	75-01-4
Vinylidene chloride (1,1-Dichloroethylene)	75-35-4
Xylene (m-)	108-38-3
Xylene (o-)	95-47-6
Xylene (p-)	106-42-3
Xylenes (isomers and mixtures)	1330-20-7

[1] CAS numbers refer to the Chemical Abstracts Services registry number assigned to specific compounds, isomers, or mixtures of compounds.

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Table 2 to Subpart EEEE of Part 63—Emission Limits

As stated in § 63.2346, you must comply with the emission limits for the organic liquids distribution emission sources as follows:

If you own or operate . . .	And if . . .	Then you must . . .
1. A storage tank at an existing affected source with a capacity ≥18.9 cubic meters (5,000 gallons) and <189.3 cubic meters (50,000 gallons).	a. The stored organic liquid is not crude oil and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is ≥27.6 kilopascals (4.0 psia) and <76.6 kilopascals (11.1 psia).	i. Reduce emissions of total organic HAP (or, upon approval, TOC) by at least 95 weight-percent or, as an option, to an exhaust concentration less than or equal to 20 ppmv, on a dry basis corrected to 3 percent oxygen for combustion devices using supplemental combustion air, by venting emissions through a closed vent system to any combination of control devices meeting the applicable requirements of 40 CFR part 63, subpart SS; OR

If you own or operate . . .	And if . . .	Then you must . . .
		ii. Comply with the work practice standards specified in table 4 to this subpart, items 1.a, 1.b, or 1.c for tanks storing liquids described in that table.
	b. The stored organic liquid is crude oil.	i. See the requirement in item 1.a.i or 1.a.ii of this table.
2. A storage tank at an existing affected source with a capacity ≥189.3 cubic meters (50,000 gallons).	a. The stored organic liquid is not crude oil and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is <76.6 kilopascals (11.1 psia).	i. See the requirement in item 1.a.i or 1.a.ii of this table.
	b. The stored organic liquid is crude oil.	i. See the requirement in item 1.a.i or 1.a.ii of this table.
3. A storage tank at a reconstructed or new affected source with a capacity ≥18.9 cubic meters (5,000 gallons) and <37.9 cubic meters (10,000 gallons).	a. The stored organic liquid is not crude oil and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is ≥27.6 kilopascals (4.0 psia) and <76.6 kilopascals (11.1 psia).	i. See the requirement in item 1.a.i or 1.a.ii of this table.
	b. The stored organic liquid is crude oil.	i. See the requirement in item 1.a.i or 1.a.ii of this table.
4. A storage tank at a reconstructed or new affected source with a capacity ≥37.9 cubic meters (10,000 gallons) and <189.3 cubic meters (50,000 gallons).	a. The stored organic liquid is not crude oil and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is ≥0.7 kilopascals (0.1 psia) and <76.6 kilopascals (11.1 psia).	i. See the requirement in item 1.a.i or 1.a.ii of this table.
	b. The stored organic liquid is crude oil.	i. See the requirement in item 1.a.i or 1.a.ii of this table.
5. A storage tank at a reconstructed or new affected source with a capacity ≥189.3 cubic meters (50,000 gallons).	a. The stored organic liquid is not crude oil and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is <76.6 kilopascals (11.1 psia).	i. See the requirement in item 1.a.i or 1.a.ii of this table.
	b. The stored organic liquid is crude oil.	i. See the requirement in item 1.a.i or 1.a.ii of this table.
6. A storage tank at an existing, reconstructed, or new affected source meeting the capacity criteria specified in table 2 of this subpart, items 1 through 5.	a. The stored organic liquid is not crude oil and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is ≥76.6 kilopascals (11.1 psia).	i. Reduce emissions of total organic HAP (or, upon approval, TOC) by at least 95 weight-percent or, as an option, to an exhaust concentration less than or equal to 20 ppmv, on a dry basis corrected to 3 percent oxygen for combustion devices using supplemental combustion air, by venting emissions through a closed vent system to any combination of control devices meeting the applicable requirements of 40 CFR part 63, subpart SS; OR
		ii. Comply with the work practice standards specified in table 4 to this subpart, item 2.a, for tanks storing the liquids described in that table.

If you own or operate . . .	And if . . .	Then you must . . .
7. A transfer rack at an existing facility where the total actual annual facility-level organic liquid loading volume through transfer racks is equal to or greater than 800,000 gallons and less than 10 million gallons.	a. The total table 1 organic HAP content of the organic liquid being loaded through one or more of the transfer rack's arms is at least 98 percent by weight and is being loaded into a transport vehicle.	i. For all such loading arms at the rack, reduce emissions of total organic HAP (or, upon approval, TOC) from the loading of organic liquids either by venting the emissions that occur during loading through a closed vent system to any combination of control devices meeting the applicable requirements of 40 CFR part 63, subpart SS, achieving at least 98 weight-percent HAP reduction, OR, as an option, to an exhaust concentration less than or equal to 20 ppmv, on a dry basis corrected to 3 percent oxygen for combustion devices using supplemental combustion air; OR
		ii. During the loading of organic liquids, comply with the work practice standards specified in item 3 of table 4 to this subpart.
8. A transfer rack at an existing facility where the total actual annual facility-level organic liquid loading volume through transfer racks is ≥10 million gallons.	a. One or more of the transfer rack's arms is loading an organic liquid into a transport vehicle.	i. See the requirements in items 7.a.i and 7.a.ii of this table.
9. A transfer rack at a new facility where the total actual annual facility-level organic liquid loading volume through transfer racks is less than 800,000 gallons	a. The total Table 1 organic HAP content of the organic liquid being loaded through one or more of the transfer rack's arms is at least 25 percent by weight and is being loaded into a transport vehicle	i. See the requirements in items 7.a.i and 7.a.ii of this table.
	b. One or more of the transfer rack's arms is filling a container with a capacity equal to or greater than 55 gallons	i. For all such loading arms at the rack during the loading of organic liquids, comply with the provisions of §§ 63.924 through 63.927 of 40 CFR part 63, Subpart PP—National Emission Standards for Containers, Container Level 3 controls; OR ii. During the loading of organic liquids, comply with the work practice standards specified in item 3.a of Table 4 to this subpart.
10. A transfer rack at a new facility where the total actual annual facility-level organic liquid loading volume through transfer racks is equal to or greater than 800,000 gallons.	a. One or more of the transfer rack's arms is loading an organic liquid into a transport vehicle.	i. See the requirements in items 7.a.i and 7.a.ii of this table.
	b. One or more of the transfer rack's arms is filling a container with a capacity equal to or greater than 55 gallons.	i. For all such loading arms at the rack during the loading of organic liquids, comply with the provisions of §§ 63.924 through 63.927 of 40 CFR part 63, Subpart PP—National Emission Standards for Containers, Container Level 3 controls; OR
		ii. During the loading of organic liquids, comply with the work practice standards specified in item 3.a of table 4 to this subpart.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42913, July 28, 2006; 73 FR 21830, Apr. 23, 2008]

Table 3 to Subpart EEEE of Part 63—Operating Limits—High Throughput Transfer Racks

As stated in § 63.2346(e), you must comply with the operating limits for existing, reconstructed, or new affected sources as follows:

For each existing, each reconstructed, and each new affected source using . . .	You must . . .
1. A thermal oxidizer to comply with an emission limit in table 2 to this subpart	Maintain the daily average fire box or combustion zone temperature greater than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit.
2. A catalytic oxidizer to comply with an emission limit in table 2 to this subpart	a. Replace the existing catalyst bed before the age of the bed exceeds the maximum allowable age established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND
	b. Maintain the daily average temperature at the inlet of the catalyst bed greater than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND
	c. Maintain the daily average temperature difference across the catalyst bed greater than or equal to the minimum temperature difference established during the design evaluation or performance test that demonstrated compliance with the emission limit.
3. An absorber to comply with an emission limit in table 2 to this subpart	a. Maintain the daily average concentration level of organic compounds in the absorber exhaust less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR
	b. Maintain the daily average scrubbing liquid temperature less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND
	Maintain the difference between the specific gravities of the saturated and fresh scrubbing fluids greater than or equal to the difference established during the design evaluation or performance test that demonstrated compliance with the emission limit.
4. A condenser to comply with an emission limit in table 2 to this subpart	a. Maintain the daily average concentration level of organic compounds at the condenser exit less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR
	b. Maintain the daily average condenser exit temperature less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit.
5. An adsorption system with adsorbent regeneration to comply with an emission limit in table 2 to this subpart	a. Maintain the daily average concentration level of organic compounds in the adsorber exhaust less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR
	b. Maintain the total regeneration stream mass flow during the adsorption bed regeneration cycle greater than or equal to the reference stream mass flow established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND
	Before the adsorption cycle commences, achieve and maintain the temperature of the adsorption bed after regeneration less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND
	Achieve a pressure reduction during each adsorption bed regeneration cycle greater than or equal to the pressure reduction established during the design evaluation or performance test that demonstrated compliance with the emission limit.

For each existing, each reconstructed, and each new affected source using . . .	You must . . .
6. An adsorption system without adsorbent regeneration to comply with an emission limit in table 2 to this subpart	a. Maintain the daily average concentration level of organic compounds in the adsorber exhaust less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR
	b. Replace the existing adsorbent in each segment of the bed with an adsorbent that meets the replacement specifications established during the design evaluation or performance test before the age of the adsorbent exceeds the maximum allowable age established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND
	Maintain the temperature of the adsorption bed less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit.
7. A flare to comply with an emission limit in table 2 to this subpart	a. Comply with the equipment and operating requirements in § 63.987(a); AND b. Conduct an initial flare compliance assessment in accordance with § 63.987(b); AND
	c. Install and operate monitoring equipment as specified in § 63.987(c).
8. Another type of control device to comply with an emission limit in table 2 to this subpart	Submit a monitoring plan as specified in §§ 63.995(c) and 63.2366(b), and monitor the control device in accordance with that plan.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42914, July 28, 2006]

Table 4 to Subpart EEEE of Part 63—Work Practice Standards

As stated in § 63.2346, you may elect to comply with one of the work practice standards for existing, reconstructed, or new affected sources in the following table. If you elect to do so, . . .

For each . . .	You must . . .
1. Storage tank at an existing, reconstructed, or new affected source meeting any set of tank capacity and organic HAP vapor pressure criteria specified in table 2 to this subpart, items 1 through 5	a. Comply with the requirements of 40 CFR part 63, subpart WW (control level 2), if you elect to meet 40 CFR part 63, subpart WW (control level 2) requirements as an alternative to the emission limit in table 2 to this subpart, items 1 through 5; OR
	b. Comply with the requirements of § 63.984 for routing emissions to a fuel gas system or back to a process; OR
	c. Comply with the requirements of § 63.2346(a)(4) for vapor balancing emissions to the transport vehicle from which the storage tank is filled.
2. Storage tank at an existing, reconstructed, or new affected source meeting any set of tank capacity and organic HAP vapor pressure criteria specified in table 2 to this subpart, item 6	a. Comply with the requirements of § 63.984 for routing emissions to a fuel gas system or back to a process; OR b. Comply with the requirements of § 63.2346(a)(4) for vapor balancing emissions to the transport vehicle from which the storage tank is filled.
3. Transfer rack subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10, at an existing, reconstructed, or new affected source	a. If the option of a vapor balancing system is selected, install and, during the loading of organic liquids, operate a system that meets the requirements in table 7 to this subpart, item 3.b.i and item 3.b.ii, as applicable; OR
	b. Comply with the requirements of § 63.984 during the loading of organic liquids, for routing emissions to a fuel gas system or back to a process.

For each . . .	You must . . .
4. Pump, valve, and sampling connection that operates in organic liquids service at least 300 hours per year at an existing, reconstructed, or new affected source	Comply with the requirements for pumps, valves, and sampling connections in 40 CFR part 63, subpart TT (control level 1), subpart UU (control level 2), or subpart H.
5. Transport vehicles equipped with vapor collection equipment that are loaded at transfer racks that are subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10	Follow the steps in 40 CFR 60.502(e) to ensure that organic liquids are loaded only into vapor-tight transport vehicles, and comply with the provisions in 40 CFR 60.502(f), (g), (h), and (i), except substitute the term transport vehicle at each occurrence of tank truck or gasoline tank truck in those paragraphs.
6. Transport vehicles equipped without vapor collection equipment that are loaded at transfer racks that are subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10	Ensure that organic liquids are loaded only into transport vehicles that have a current certification in accordance with the U.S. DOT pressure test requirements in 49 CFR 180 (cargo tanks) or 49 CFR 173.31 (tank cars).

[71 FR 42915, July 28, 2006]

Table 5 to Subpart EEEE of Part 63—Requirements for Performance Tests and Design Evaluations

As stated in §§ 63.2354(a) and 63.2362, you must comply with the requirements for performance tests and design evaluations for existing, reconstructed, or new affected sources as follows:

For . . .	You must conduct . . .	According to . . .	Using . . .	To determine . . .	According to the following requirements . . .
1. Each existing, each reconstructed, and each new affected source using a nonflare control device to comply with an emission limit in Table 2 to this subpart, items 1 through 10	a. A performance test to determine the organic HAP (or, upon approval, TOC) control efficiency of each nonflare control device, OR the exhaust concentration of each combustion device; OR	i. § 63.985(b)(1)(ii), § 63.988(b), § 63.990(b), or § 63.995(b)	(1) EPA Method 1 or 1A in appendix A-1 of 40 CFR part 60, as appropriate	(A) Sampling port locations and the required number of traverse points	(i) Sampling sites must be located at the inlet and outlet of each control device if complying with the control efficiency requirement or at the outlet of the control device if complying with the exhaust concentration requirement; AND (ii) the outlet sampling site must be located at each control device prior to any releases to the atmosphere.
			(2) EPA Method 2, 2A, 2C, 2D, or 2F in appendix A-1 of 40 CFR part 60, or EPA Method 2G in appendix A-2 of 40 CFR part 60, as appropriate	(A) Stack gas velocity and volumetric flow rate	See the requirements in items 1.a.i.(1)(A)(i) and (ii) of this table.

For . . .	You must conduct . . .	According to . . .	Using . . .	To determine . . .	According to the following requirements . . .
			(3) EPA Method 3 or 3B in appendix A-2 of 40 CFR part 60, as appropriate	(A) Concentration of $CO_2$and $O_2$and dry molecular weight of the stack gas	See the requirements in items 1.a.i.(1)(A)(i) and (ii) of this table.
			(4) EPA Method 4 in appendix A-3 of 40 CFR part 60	(A) Moisture content of the stack gas	See the requirements in items 1.a.i.(1)(A)(i) and (ii) of this table.
			(5) EPA Method 18 in appendix A-6 of 40 CFR part 60, or EPA Method 25 or 25A in appendix A-7 of 40 CFR part 60, as appropriate, or EPA Method 316 in appendix A of 40 CFR part 63 for measuring form-aldehyde	(A) Total organic HAP (or, upon approval, TOC), or formaldehyde emissions	(i) The organic HAP used for the calibration gas for EPA Method 25A in appendix A-7 of 40 CFR part 60 must be the single organic HAP representing the largest percent by volume of emissions; AND (ii) During the performance test, you must establish the operating parameter limits within which total organic HAP (or, upon approval, TOC) emissions are reduced by the required weight-percent or, as an option for nonflare combustion devices, to 20 ppmv exhaust concentration.
	b. A design evaluation (for nonflare control devices) to determine the organic HAP (or, upon approval, TOC) control efficiency of each nonflare control device, or the exhaust concentration of each combustion control device	§ 63.985(b)(1)(i)			During a design evaluation, you must establish the operating parameter limits within which total organic HAP, (or, upon approval, TOC) emissions are reduced by at least 95 weight-percent for storage tanks or 98 weight-percent for transfer racks, or, as an option for nonflare combustion devices, to 20 ppmv exhaust concentration.

For . . .	You must conduct . . .	According to . . .	Using . . .	To determine . . .	According to the following requirements . . .
2. Each transport vehicle that you own that is equipped with vapor collection equipment and is loaded with organic liquids at a transfer rack that is subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10, at an existing, reconstructed, or new affected source	A performance test to determine the vapor tightness of the tank and then repair as needed until it passes the test.		EPA Method 27 in appendix A of 40 CFR part 60	Vapor tightness	The pressure change in the tank must be no more than 250 pascals (1 inch of water) in 5 minutes after it is pressurized to 4,500 pascals (18 inches of water).

[71 FR 42916, July 28, 2006, as amended at 73 FR 21831, Apr. 23, 2008]

Table 6 to Subpart EEEE of Part 63—Initial Compliance With Emission Limits

As stated in §§ 63.2370(a) and 63.2382(b), you must show initial compliance with the emission limits for existing, reconstructed, or new affected sources as follows:

For each . . .	For the following emission limit . . .	You have demonstrated initial compliance if . . .
1. Storage tank at an existing, reconstructed, or new affected source meeting any set of tank capacity and liquid organic HAP vapor pressure criteria specified in Table 2 to this subpart, items 1 through 6	Reduce total organic HAP (or, upon approval, TOC) emissions by at least 95 weight-percent, or as an option for nonflare combustion devices to an exhaust concentration of ≤20 ppmv	Total organic HAP (or, upon approval, TOC) emissions, based on the results of the performance testing or design evaluation specified in Table 5 to this subpart, item 1.a or 1.b, respectively, are reduced by at least 95 weight-percent or as an option for nonflare combustion devices to an exhaust concentration ≤20 ppmv.
2. Transfer rack that is subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10, at an existing, reconstructed, or new affected source	Reduce total organic HAP (or, upon approval, TOC) emissions from the loading of organic liquids by at least 98 weight-percent, or as an option for nonflare combustion devices to an exhaust concentration of ≤20 ppmv	Total organic HAP (or, upon approval, TOC) emissions from the loading of organic liquids, based on the results of the performance testing or design evaluation specified in table 5 to this subpart, item 1.a or 1.b, respectively, are reduced by at least 98 weight-percent or as an option for nonflare combustion devices to an exhaust concentration of ≤20 ppmv.

[71 FR 42918, July 28, 2006, as amended at 73 FR 21832, Apr. 23, 2008]

Table 7 to Subpart EEEE of Part 63—Initial Compliance With Work Practice Standards

For each . . .	If you . . .	You have demonstrated initial compliance if . . .
1. Storage tank at an existing affected source meeting either set of tank capacity and liquid organic HAP vapor pressure criteria specified in Table 2 to this subpart, items 1 or 2	a. Install a floating roof or equivalent control that meets the requirements in Table 4 to this subpart, item 1.a	i. After emptying and degassing, you visually inspect each internal floating roof before the refilling of the storage tank and perform seal gap inspections of the primary and secondary rim seals of each external floating roof within 90 days after the refilling of the storage tank.
	b. Route emissions to a fuel gas system or back to a process	i. You meet the requirements in § 63.984(b) and submit the statement of connection required by § 63.984(c).
	c. Install and, during the filling of the storage tank with organic liquids, operate a vapor balancing system	i. You meet the requirements in § 63.2346(a)(4).
2. Storage tank at a reconstructed or new affected source meeting any set of tank capacity and liquid organic HAP vapor pressure criteria specified in Table 2 to this subpart, items 3 through 5	a. Install a floating roof or equivalent control that meets the requirements in Table 4 to this subpart, item 1.a	i. You visually inspect each internal floating roof before the initial filling of the storage tank, and perform seal gap inspections of the primary and secondary rim seals of each external floating roof within 90 days after the initial filling of the storage tank.
	b. Route emissions to a fuel gas system or back to a process	i. See item 1.b.i of this table.
	c. Install and, during the filling of the storage tank with organic liquids, operate a vapor balancing system	i. See item 1.c.i of this table.
3. Transfer rack that is subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10, at an existing, reconstructed, or new affected source	a. Load organic liquids only into transport vehicles having current vapor tightness certification as described in table 4 to this subpart, item 5 and item 6	i. You comply with the provisions specified in table 4 to this subpart, item 5 or item 6, as applicable.
	b. Install and, during the loading of organic liquids, operate a vapor balancing system	i. You design and operate the vapor balancing system to route organic HAP vapors displaced from loading of organic liquids into transport vehicles to the storage tank from which the liquid being loaded originated or to another storage tank connected to a common header. ii. You design and operate the vapor balancing system to route organic HAP vapors displaced from loading of organic liquids into containers directly (e.g., no intervening tank or containment area such as a room) to the storage tank from which the liquid being loaded originated or to another storage tank connected to a common header.
	c. Route emissions to a fuel gas system or back to a process	i. See item 1.b.i of this table.
4. Equipment leak component, as defined in § 63.2406, that operates in organic liquids service ≥300 hours per year at an existing, reconstructed, or new affected source	a. Carry out a leak detection and repair program or equivalent control according to one of the subparts listed in table 4 to this subpart, item 4.a	i. You specify which one of the control programs listed in table 4 to this subpart you have selected, OR ii. Provide written specifications for your equivalent control approach.

[71 FR 42918, July 28, 2006, as amended at 73 FR 21833, Apr. 23, 2008]

Table 8 to Subpart EEEE of Part 63—Continuous Compliance With Emission Limits

As stated in §§ 63.2378(a) and (b) and 63.2390(b), you must show continuous compliance with the emission limits for existing, reconstructed, or new affected sources according to the following table:

For each . . .	For the following emission limit . . .	You must demonstrate continuous compliance by . . .
1. Storage tank at an existing, reconstructed, or new affected source meeting any set of tank capacity and liquid organic HAP vapor pressure criteria specified in table 2 to this subpart, items 1 through 6	a. Reduce total organic HAP (or, upon approval, TOC) emissions from the closed vent system and control device by 95 weight-percent or greater, or as an option to 20 ppmv or less of total organic HAP (or, upon approval, TOC) in the exhaust of combustion devices	i. Performing CMS monitoring and collecting data according to §§ 63.2366, 63.2374, and 63.2378; AND ii. Maintaining the operating limits established during the design evaluation or performance test that demonstrated compliance with the emission limit.
2. Transfer rack that is subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10, at an existing, reconstructed, or new affected source	a. Reduce total organic HAP (or, upon approval, TOC) emissions during the loading of organic liquids from the closed vent system and control device by 98 weight-percent or greater, or as an option to 20 ppmv or less of total organic HAP (or, upon approval, TOC) in the exhaust of combustion devices	i. Performing CMS monitoring and collecting data according to §§ 63.2366, 63.2374, and 63.2378 during the loading of organic liquids; AND ii. Maintaining the operating limits established during the design evaluation or performance test that demonstrated compliance with the emission limit during the loading of organic liquids.

[71 FR 42919, July 28, 2006]

Table 9 to Subpart EEEE of Part 63—Continuous Compliance With Operating Limits—High Throughput Transfer Racks

As stated in §§ 63.2378(a) and (b) and 63.2390(b), you must show continuous compliance with the operating limits for existing, reconstructed, or new affected sources according to the following table:

For each existing, reconstructed, and each new affected source using . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
1. A thermal oxidizer to comply with an emission limit in table 2 to this subpart.	a. Maintain the daily average fire box or combustion zone, as applicable, temperature greater than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit.	i. Continuously monitoring and recording fire box or combustion zone, as applicable, temperature every 15 minutes and maintaining the daily average fire box temperature greater than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in § 63.998.

For each existing, reconstructed, and each new affected source using . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
2. A catalytic oxidizer to comply with an emission limit in table 2 to this subpart.	a. Replace the existing catalyst bed before the age of the bed exceeds the maximum allowable age established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND	i. Replacing the existing catalyst bed before the age of the bed exceeds the maximum allowable age established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in § 63.998.
	b. Maintain the daily average temperature at the inlet of the catalyst bed greater than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND	i. Continuously monitoring and recording the temperature at the inlet of the catalyst bed at least every 15 minutes and maintaining the daily average temperature at the inlet of the catalyst bed greater than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in § 63.998.
	c. Maintain the daily average temperature difference across the catalyst bed greater than or equal to the minimum temperature difference established during the design evaluation or performance test that demonstrated compliance with the emission limit.	i. Continuously monitoring and recording the temperature at the outlet of the catalyst bed every 15 minutes and maintaining the daily average temperature difference across the catalyst bed greater than or equal to the minimum temperature difference established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in § 63.998.
3. An absorber to comply with an emission limit in table 2 to this subpart.	a. Maintain the daily average concentration level of organic compounds in the absorber exhaust less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR	i. Continuously monitoring the organic concentration in the absorber exhaust and maintaining the daily average concentration less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in § 63.998.
	b. Maintain the daily average scrubbing liquid temperature less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND Maintain the difference between the specific gravities of the saturated and fresh scrubbing fluids greater than or equal to the difference established during the design evaluation or performance test that demonstrated compliance with the emission limit.	i. Continuously monitoring the scrubbing liquid temperature and maintaining the daily average temperature less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Maintaining the difference between the specific gravities greater than or equal to the difference established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND iii. Keeping the applicable records required in § 63.998.

For each existing, reconstructed, and each new affected source using . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
4. A condenser to comply with an emission limit in table 2 to this subpart.	a. Maintain the daily average concentration level of organic compounds at the exit of the condenser less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR	i. Continuously monitoring the organic concentration at the condenser exit and maintaining the daily average concentration less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in § 63.998.
	b. Maintain the daily average condenser exit temperature less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit.	i. Continuously monitoring and recording the temperature at the exit of the condenser at least every 15 minutes and maintaining the daily average temperature less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in § 63.998.
5. An adsorption system with adsorbent regeneration to comply with an emission limit in table 2 to this subpart.	a. Maintain the daily average concentration level of organic compounds in the adsorber exhaust less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR	i. Continuously monitoring the daily average organic concentration in the adsorber exhaust and maintaining the concentration less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in § 63.998.
	b. Maintain the total regeneration stream mass flow during the adsorption bed regeneration cycle greater than or equal to the reference stream mass flow established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND Before the adsorption cycle commences, achieve and maintain the temperature of the adsorption bed after regeneration less than or equal to the reference temperature established during the design evaluation or performance test; AND Achieve greater than or equal to the pressure reduction during the adsorption bed regeneration cycle established during the design evaluation or performance test that demonstrated compliance with the emission limit.	i. Maintaining the total regeneration stream mass flow during the adsorption bed regeneration cycle greater than or equal to the reference stream mass flow established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Maintaining the temperature of the adsorption bed after regeneration less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND iii. Achieving greater than or equal to the pressure reduction during the regeneration cycle established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND iv. Keeping the applicable records required in § 63.998.

For each existing, reconstructed, and each new affected source using . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
6. An adsorption system without adsorbent regeneration to comply with an emission limit in table 2 to this subpart.	a. Maintain the daily average concentration level of organic compounds in the adsorber exhaust less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR	i. Continuously monitoring the organic concentration in the adsorber exhaust and maintaining the concentration less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in § 63.998.
	b. Replace the existing adsorbent in each segment of the bed before the age of the adsorbent exceeds the maximum allowable age established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND Maintain the temperature of the adsorption bed less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit.	i. Replacing the existing adsorbent in each segment of the bed with an adsorbent that meets the replacement specifications established during the design evaluation or performance test before the age of the adsorbent exceeds the maximum allowable age established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Maintaining the temperature of the adsorption bed less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND iii. Keeping the applicable records required in § 63.998.
7. A flare to comply with an emission limit in table 2 to this subpart.	a. Maintain a pilot flame in the flare at all times that vapors may be vented to the flare (§ 63.11(b)(5)); AND	i. Continuously operating a device that detects the presence of the pilot flame; AND ii. Keeping the applicable records required in § 63.998.
	b. Maintain a flare flame at all times that vapors are being vented to the flare (§ 63.11(b)(5)); AND	i. Maintaining a flare flame at all times that vapors are being vented to the flare; AND ii. Keeping the applicable records required in § 63.998.
	c. Operate the flare with no visible emissions, except for up to 5 minutes in any 2 consecutive hours (§ 63.11(b)(4)); AND EITHER	i. Operating the flare with no visible emissions exceeding the amount allowed; AND ii. Keeping the applicable records required in § 63.998.
	d.1. Operate the flare with an exit velocity that is within the applicable limits in § 63.11(b)(7) and (8) and with a net heating value of the gas being combusted greater than the applicable minimum value in § 63.11(b)(6)(ii); OR	i. Operating the flare within the applicable exit velocity limits; AND ii. Operating the flare with the gas heating value greater than the applicable minimum value; AND iii. Keeping the applicable records required in § 63.998.
	d.2. Adhere to the requirements in § 63.11(b)(6)(i).	i. Operating the flare within the applicable limits in 63.11(b)(6)(i); AND ii. Keeping the applicable records required in § 63.998.
8. Another type of control device to comply with an emission limit in table 2 to this subpart.	Submit a monitoring plan as specified in §§ 63.995(c) and 63.2366(c), and monitor the control device in accordance with that plan.	Submitting a monitoring plan and monitoring the control device according to that plan.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42919, July 28, 2006]

Table 10 to Subpart EEEE of Part 63—Continuous Compliance With Work Practice Standards

As stated in §§ 63.2378(a) and (b) and 63.2386(c)(6), you must show continuous compliance with the work practice standards for existing, reconstructed, or new affected sources according to the following table:

For each . . .	For the following standard . . .	You must demonstrate continuous compliance by . . .
1. Internal floating roof (IFR) storage tank at an existing, reconstructed, or new affected source meeting any set of tank capacity, and vapor pressure criteria specified in table 2 to this subpart, items 1 through 5.	a. Install a floating roof designed and operated according to the applicable specifications in § 63.1063(a) and (b).	i. Visually inspecting the floating roof deck, deck fittings, and rim seals of each IFR once per year (§ 63.1063(d)(2)); AND ii. Visually inspecting the floating roof deck, deck fittings, and rim seals of each IFR either each time the storage tank is completely emptied and degassed or every 10 years, whichever occurs first (§ 63.1063(c)(1), (d)(1), and (e)); AND iii. Keeping the tank records required in § 63.1065.
2. External floating roof (EFR) storage tank at an existing, reconstructed, or new affected source meeting any set of tank capacity and vapor pressure criteria specified in table 2 to this subpart, items 1 through 5.	a. Install a floating roof designed and operated according to the applicable specifications in § 63.1063(a) and (b).	i. Visually inspecting the floating roof deck, deck fittings, and rim seals of each EFR either each time the storage tank is completely emptied and degassed or every 10 years, whichever occurs first (§ 63.1063(c)(2), (d), and (e)); AND ii. Performing seal gap measurements on the secondary seal of each EFR at least once every year, and on the primary seal of each EFR at least every 5 years (§ 63.1063(c)(2), (d), and (e)); AND iii. Keeping the tank records required in § 63.1065.
3. IFR or EFR tank at an existing, reconstructed, or new affected source meeting any set of tank capacity and vapor pressure criteria specified in table 2 to this subpart, items 1 through 5.	a. Repair the conditions causing storage tank inspection failures (§ 63.1063(e)).	i. Repairing conditions causing inspection failures: before refilling the storage tank with organic liquid, or within 45 days (or up to 105 days with extensions) for a tank containing organic liquid; AND ii. Keeping the tank records required in § 63.1065(b).
4. Transfer rack that is subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10, at an existing, reconstructed, or new affected source.	a. Ensure that organic liquids are loaded into transport vehicles in accordance with the requirements in table 4 to this subpart, items 5 or 6, as applicable.	i. Ensuring that organic liquids are loaded into transport vehicles in accordance with the requirements in table 4 to this subpart, items 5 or 6, as applicable.
	b. Install and, during the loading of organic liquids, operate a vapor balancing system.	i. Monitoring each potential source of vapor leakage in the system quarterly during the loading of a transport vehicle or the filling of a container using the methods and procedures described in the rule requirements selected for the work practice standard for equipment leak components as specified in table 4 to this subpart, item 4. An instrument reading of 500 ppmv defines a leak. Repair of leaks is performed according to the repair requirements specified in your selected equipment leak standards.
	c. Route emissions to a fuel gas system or back to a process.	i. Continuing to meet the requirements specified in § 63.984(b).
5. Equipment leak component, as defined in § 63.2406, that operates in organic liquids service at least 300 hours per year.	a. Comply with the requirements of 40 CFR part 63, subpart TT, UU, or H.	i. Carrying out a leak detection and repair program in accordance with the subpart selected from the list in item 5.a of this table.

For each . . .	For the following standard . . .	You must demonstrate continuous compliance by . . .
6. Storage tank at an existing, reconstructed, or new affected source meeting any of the tank capacity and vapor pressure criteria specified in table 2 to this subpart, items 1 through 6.	a. Route emissions to a fuel gas system or back to the process.	i. Continuing to meet the requirements specified in § 63.984(b).
	b. Install and, during the filling of the storage tank with organic liquids, operate a vapor balancing system.	i. Except for pressure relief devices, monitoring each potential source of vapor leakage in the system, including, but not limited to pumps, valves, and sampling connections, quarterly during the loading of a storage tank using the methods and procedures described in the rule requirements selected for the work practice standard for equipment leak components as specified in Table 4 to this subpart, item 4. An instrument reading of 500 ppmv defines a leak. Repair of leaks is performed according to the repair requirements specified in your selected equipment leak standards. For pressure relief devices, comply with § 63.2346(a)(4)(v). If no loading of a storage tank occurs during a quarter, then monitoring of the vapor balancing system is not required.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42922, July 28, 2006; 73 FR 40982, July 17, 2008]

Table 11 to Subpart EEEE of Part 63—Requirements for Reports

As stated in § 63.2386(a), (b), and (f), you must submit compliance reports and startup, shutdown, and malfunction reports according to the following table:

You must submit a(n) . . .	The report must contain . . .	You must submit the report . . .
1. Compliance report or Periodic Report	a. The information specified in § 63.2386(c), (d), (e). If you had a SSM during the reporting period and you took actions consistent with your SSM plan, the report must also include the information in § 63.10(d)(5)(i); AND	Semiannually, and it must be postmarked by January 31 or July 31, in accordance with § 63.2386(b).
	b. The information required by 40 CFR part 63, subpart TT, UU, or H, as applicable, for pumps, valves, and sampling connections; AND	See the submission requirement in item 1.a of this table.
	c. The information required by § 63.999(c); AND	See the submission requirement in item 1.a of this table.
	d. The information specified in § 63.1066(b) including: Notification of inspection, inspection results, requests for alternate devices, and requests for extensions, as applicable.	See the submission requirement in item 1.a. of this table.
2. Immediate SSM report if you had a SSM that resulted in an applicable emission standard in the relevant standard being exceeded, and you took an action that was not consistent with your SSM plan	a. The information required in § 63.10(d)(5)(ii)	i. By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority (§ 63.10(d)(5)(ii)).

[71 FR 42923, July 28, 2006]

Table 12 to Subpart EEEE of Part 63—Applicability of General Provisions to Subpart EEEE

As stated in §§ 63.2382 and 63.2398, you must comply with the applicable General Provisions requirements as follows:

Citation	Subject	Brief description	Applies to subpart EEEE
§ 63.1	Applicability	Initial applicability determination; Applicability after standard established; Permit requirements; Extensions, Notifications	Yes.
§ 63.2	Definitions	Definitions for part 63 standards	Yes.
§ 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.
§ 63.6(a)	Compliance with Standards/O&M Applicability	GP apply unless compliance extension; GP 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 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	Yes.
§ 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 section 112(f) standards, comply within 90 days of effective date unless compliance extension	Yes.
§ 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)	Yes.
§ 63.6(d)	[Reserved].		
§ 63.6(e)(1)	Operation & Maintenance	Operate to minimize emissions at all times; correct malfunctions as soon as practicable; and operation and maintenance requirements independently enforceable; information Administrator will use to determine if operation and maintenance requirements were met	Yes.

Citation	Subject	Brief description	Applies to subpart EEEE
§ 63.6(e)(2)	[Reserved].		
§ 63.6(e)(3)	SSM Plan	Requirement for SSM plan; content of SSM plan; actions during SSM	Yes; however, (1) the 2-day reporting requirement in paragraph § 63.6(e)(3)(iv) does not apply and (2) § 63.6(e)(3) does not apply to emissions sources not requiring control.
§ 63.6(f)(1)	Compliance Except During SSM	You must comply with emission standards at all times except during SSM	Yes.
§ 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)	Opacity/Visible Emission Standards	Requirements for compliance with opacity and visible emission standards	No; except as it applies to flares for which Method 22 observations are required as part of a flare compliance assessment.
§ 63.6(i)(1)-(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.
§ 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)	Section 114 Authority	Adminsitrator 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 Rescheduling	If you 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 tests must be conducted under representative conditions; cannot conduct performance tests during SSM	Yes.

Citation	Subject	Brief description	Applies to subpart EEEE
§ 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; however, for transfer racks per §§ 63.987(b)(3)(i)(A)-(B) and 63.997(e)(1)(v)(A)-(B) provide exceptions to the requirement for test runs to be at least 1 hour each.
§ 63.7(f)	Alternative Test Method	Procedures by which Administrator can grant approval to use an intermediate or major change, or alternative to a test method	Yes.
§ 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; however, performance test data is to be submitted with the Notification of Compliance Status according to the schedule specified in § 63.9(h)(1)-(6) below.
§ 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	Yes; however, monitoring requirements in § 63.987(c) also apply.
§ 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	Yes.
§ 63.8(c)(1)	Monitoring System Operation and Maintenance	Maintain monitoring system in a manner consistent with good air pollution control practices	Yes.
§ 63.8(c)(1)(i)-(iii)	Routine and Predictable SSM	Keep parts for routine repairs readily available; reporting requirements for SSM when action is described in SSM plan.	Yes.

Citation	Subject	Brief description	Applies to subpart EEEE
§ 63.8(c)(2)-(3)	Monitoring System Installation	Must install to get representative emission or parameter measurements; must verify operational status before or at performance test	Yes.
§ 63.8(c)(4)	CMS Requirements	CMS must be operating except during breakdown, out-of control, repair, maintenance, and high-level calibration drifts; COMS must have a minimum of one cycle of sampling and analysis for each successive 10-second period and one cycle of data recording for each successive 6-minute period; CEMS must have a minimum of one cycle of operation for each successive 15-minute period	Yes; however, COMS are not applicable.
§ 63.8(c)(5)	COMS Minimum Procedures	COMS minimum procedures	No.
§ 63.8(c)(6)-(8)	CMS Requirements	Zero and high level calibration check requirements. Out-of-control periods	Yes, but only applies for CEMS. 40 CFR part 63, subpart SS provides requirements for CPMS.
§ 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	Yes, but only applies for CEMS. 40 CFR part 63, subpart SS provides requirements for CPMS.
§ 63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	Yes, but only applies for CEMS.
§ 63.8(f)(1)-(5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	Yes, but 40 CFR part 63, subpart SS also provides procedures for approval of CPMS.
§ 63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for CEMS	Yes.
§ 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	Yes; however, COMS are not applicable.
§ 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 (BACT/LAER)	Yes.

Citation	Subject	Brief description	Applies to subpart EEEE
§ 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.
§ 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/visible emissions, which are due 30 days after; when to submit to Federal vs. State authority	Yes; however, (1) there are no opacity standards and (2) all initial Notification of Compliance Status, including all performance test data, are to be submitted at the same time, either within 240 days after the compliance date or within 60 days after the last performance test demonstrating compliance has been completed, whichever occurs first.
§ 63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change in when notifications must be submitted	Yes.
§ 63.9(j)	Change in Previous Information	Must submit within 15 days after the change	No. These changes will be reported in the first and subsequent compliance reports.
§ 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)-(iv)	Records Related to Startup, Shutdown, and Malfunction	Occurrence of each for operations (process equipment); occurrence of each malfunction of air pollution control equipment; maintenance on air pollution control equipment; actions during SSM	Yes.
§ 63.10(b)(2)(vi)-(xi)	CMS Records	Malfunctions, inoperative, out-of-control periods	Yes.
§ 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.
§ 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.

Citation	Subject	Brief description	Applies to subpart EEEE
§ 63.10(c)	Records	Additional records for CMS	Yes.
§ 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	Yes.
§ 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	Yes.
§ 63.10(e)(1)-(2)	Additional CMS Reports	Must report results for each CEMS on a unit; written copy of CMS performance evaluation; 2-3 copies of COMS performance evaluation	Yes; however, COMS are not applicable.
§ 63.10(e)(3)(i)-(iii)	Reports	Schedule for reporting excess emissions and parameter monitor exceedance (now defined as deviations)	Yes; however, note that the title of the report is the compliance report; deviations include excess emissions and parameter exceedances.
§ 63.10(e)(3)(iv)-(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions or parameter monitoring exceedance (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)	Yes.
§ 63.10(e)(3)(vi)-(viii)	Excess Emissions Report and Summary Report	Requirements for reporting excess emissions for CMS (now called deviations); requires all of the information in §§ 63.10(c)(5)-(13) and 63.8(c)(7)-(8)	Yes.
§ 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	Yes; § 63.987 requirements apply, and the section references § 63.11(b).
§ 63.11(c), (d), and (e)	Control and work practice requirements	Alternative work practice for equipment leaks	Yes.
§ 63.12	Delegation	State authority to enforce standards	Yes.
§ 63.13	Addresses	Addresses where reports, notifications, and requests are sent	Yes.

Citation	Subject	Brief description	Applies to subpart EEEE
§ 63.14	Incorporation by Reference	Test methods incorporated by reference	Yes.
§ 63.15	Availability of Information	Public and confidential information	Yes.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 20463, Apr. 20, 2006; 71 FR 42924, July 28, 2006; 73 FR 78215, Dec. 22, 2008]

Attachment D

Part 70 Operating Permit Renewal No: T089-36144-00203

[Downloaded from the eCFR on May 10, 2013]

Title 40: Protection of Environment

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

Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

Source: 76 FR 15664, Mar. 21, 2011, unless otherwise noted.

What This Subpart Covers

§ 63.7480 What is the purpose of this subpart?

This subpart establishes national emission limitations and work practice standards for hazardous air pollutants (HAP) emitted from industrial, commercial, and institutional boilers and process heaters located at major sources of HAP. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and work practice standards.

§ 63.7485 Am I subject to this subpart?

You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in § 63.7575 that is located at, or is part of, a major source of HAP, except as specified in § 63.7491. For purposes of this subpart, a major source of HAP is as defined in § 63.2, except that for oil and natural gas production facilities, a major source of HAP is as defined in § 63.7575.

[78 FR 7162, Jan. 31, 2013]

§ 63.7490 What is the affected source of this subpart?

(a) This subpart applies to new, reconstructed, and existing affected sources as described in paragraphs (a)(1) and (2) of this section.

(1) The affected source of this subpart is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in § 63.7575.

(2) The affected source of this subpart is each new or reconstructed industrial, commercial, or institutional boiler or process heater, as defined in § 63.7575, located at a major source.

(b) A boiler or process heater is new if you commence construction of the boiler or process heater after June 4, 2010, and you meet the applicability criteria at the time you commence construction.

(c) A boiler or process heater is reconstructed if you meet the reconstruction criteria as defined in § 63.2, you commence reconstruction after June 4, 2010, and you meet the applicability criteria at the time you commence reconstruction.

(d) A boiler or process heater is existing if it is not new or reconstructed.

(e) An existing electric utility steam generating unit (EGU) that meets the applicability requirements of this subpart after the effective date of this final rule due to a change (e.g., fuel switch) is considered to be an existing source under this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013]

§ 63.7491 Are any boilers or process heaters not subject to this subpart?

The types of boilers and process heaters listed in paragraphs (a) through (n) of this section are not subject to this subpart.

(a) An electric utility steam generating unit (EGU) covered by subpart UUUUU of this part.

(b) A recovery boiler or furnace covered by subpart MM of this part.

(c) A boiler or process heater that is used specifically for research and development, including test steam boilers used to provide steam for testing the propulsion systems on military vessels. This does not include units that provide heat or steam to a process at a research and development facility.

(d) A hot water heater as defined in this subpart.

(e) A refining kettle covered by subpart X of this part.

(f) An ethylene cracking furnace covered by subpart YY of this part.

(g) Blast furnace stoves as described in EPA-453/R-01-005 (incorporated by reference, see § 63.14).

(h) Any boiler or process heater that is part of the affected source subject to another subpart of this part, such as boilers and process heaters used as control devices to comply with subparts JJJ, OOO, PPP, and U of this part.

(i) Any boiler or process heater that is used as a control device to comply with another subpart of this part, or part 60, part 61, or part 65 of this chapter provided that at least 50 percent of the average annual heat input during any 3 consecutive calendar years to the boiler or process heater is provided by regulated gas streams that are subject to another standard.

(j) Temporary boilers as defined in this subpart.

(k) Blast furnace gas fuel-fired boilers and process heaters as defined in this subpart.

(l) Any boiler specifically listed as an affected source in any standard(s) established under section 129 of the Clean Air Act.

(m) A unit that burns hazardous waste covered by Subpart EEE of this part. A unit that is exempt from Subpart EEE as specified in § 63.1200(b) is not covered by Subpart EEE.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013]

EDITORIAL NOTE: At 78 FR 7162, Jan. 31, 2013, § 63.7491 was amended by revising paragraph (n). However, there is no paragraph (n) to revise.

§ 63.7495 When do I have to comply with this subpart?

(a) If you have a new or reconstructed boiler or process heater, you must comply with this subpart by January 31, 2013, or upon startup of your boiler or process heater, whichever is later.

(b) If you have an existing boiler or process heater, you must comply with this subpart no later than January 31, 2016, except as provided in § 63.6(i).

(c) If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, paragraphs (c)(1) and (2) of this section apply to you.

(1) Any new or reconstructed boiler or process heater at the existing source must be in compliance with this subpart upon startup.

(2) Any existing boiler or process heater at the existing source must be in compliance with this subpart within 3 years after the source becomes a major source.

(d) You must meet the notification requirements in § 63.7545 according to the schedule in § 63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.

(e) If you own or operate an industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for the exemption in § 63.7491(l) for commercial and industrial solid waste incineration units covered by part 60, subpart CCCC or subpart DDDD, and you cease combusting solid waste, you must be in compliance with this subpart on the effective date of the switch from waste to fuel.

(f) If you own or operate an existing EGU that becomes subject to this subpart after January 31, 2013, you must be in compliance with the applicable existing source provisions of this subpart on the effective date such unit becomes subject to this subpart.

(g) If you own or operate an existing industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for a exemption in § 63.7491(i) that becomes subject to this subpart after January 31, 2013, you must be in compliance with the applicable existing source provisions of this subpart within 3 years after such unit becomes subject to this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013]

EDITORIAL NOTE: At 78 FR 7162, Jan. 31, 2013, § 63.7495 was amended by adding paragraph (e). However, there is already a paragraph (e).

Emission Limitations and Work Practice Standards

§ 63.7499 What are the subcategories of boilers and process heaters?

The subcategories of boilers and process heaters, as defined in § 63.7575 are:

(a) Pulverized coal/solid fossil fuel units.

(b) Stokers designed to burn coal/solid fossil fuel.

(c) Fluidized bed units designed to burn coal/solid fossil fuel.

(d) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solid.

(e) Fluidized bed units designed to burn biomass/bio-based solid.

(f) Suspension burners designed to burn biomass/bio-based solid.

(g) Fuel cells designed to burn biomass/bio-based solid.

(h) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.

(i) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solid.

(j) Dutch ovens/pile burners designed to burn biomass/bio-based solid.

(k) Units designed to burn liquid fuel that are non-continental units.

(l) Units designed to burn gas 1 fuels.

(m) Units designed to burn gas 2 (other) gases.

(n) Metal process furnaces.

(o) Limited-use boilers and process heaters.

(p) Units designed to burn solid fuel.

(q) Units designed to burn liquid fuel.

(r) Units designed to burn coal/solid fossil fuel.

(s) Fluidized bed units with an integrated fluidized bed heat exchanger designed to burn coal/solid fossil fuel.

(t) Units designed to burn heavy liquid fuel.

(u) Units designed to burn light liquid fuel.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013]

§ 63.7500 What emission limitations, work practice standards, and operating limits must I meet?

(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b), through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.

(1) You must meet each emission limit and work practice standard in Tables 1 through 3, and 11 through 13 to this subpart that applies to your boiler or process heater, for each boiler or process heater at your source, except as provided under § 63.7522. The output-based emission limits, in units of pounds per million Btu of steam output, in Tables 1 or 2 to this subpart are an alternative applicable only to boilers and process heaters that generate steam. The output-based emission limits, in units of pounds per megawatt-hour, in Tables 1 or 2 to this subpart are an alternative applicable only to boilers that generate electricity. If you operate a new boiler or process heater, you can choose to comply with alternative limits as discussed in paragraphs (a)(1)(i) through (a)(1)(iii) of this section, but on or after January 31, 2016, you must comply with the emission limits in Table 1 to this subpart.

(i) If your boiler or process heater commenced construction or reconstruction after June 4, 2010 and before May 20, 2011, you may comply with the emission limits in Table 1 or 11 to this subpart until January 31, 2016.

(ii) If your boiler or process heater commenced construction or reconstruction after May 20, 2011 and before December 23, 2011, you may comply with the emission limits in Table 1 or 12 to this subpart until January 31, 2016.

(iii) If your boiler or process heater commenced construction or reconstruction after December 23, 2011 and before January 31, 2013, you may comply with the emission limits in Table 1 or 13 to this subpart until January 31, 2016.

(2) You must meet each operating limit in Table 4 to this subpart that applies to your boiler or process heater. If you use a control device or combination of control devices not covered in Table 4 to this subpart, or you wish to establish and monitor an alternative operating limit or an alternative monitoring parameter, you must apply to the EPA Administrator for approval of alternative monitoring under § 63.8(f).

(3) At all times, you must operate and maintain any affected source (as defined in § 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) As provided in § 63.6(g), EPA may approve use of an alternative to the work practice standards in this section.

(c) Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in § 63.7540. They are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, the annual tune-up, or the energy assessment requirements in Table 3 to this subpart, or the operating limits in Table 4 to this subpart.

(d) Boilers and process heaters with a heat input capacity of less than or equal to 5 million Btu per hour in the units designed to burn gas 2 (other) fuels subcategory or units designed to burn light liquid fuels subcategory must complete a tune-up every 5 years as specified in § 63.7540.

(e) Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity of less than or equal to 5 million Btu per hour must complete a tune-up every 5 years as specified in § 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity greater than 5 million Btu per hour and less than 10 million Btu per hour must complete a tune-up every 2 years as specified in § 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, or the operating limits in Table 4 to this subpart.

(f) These standards apply at all times the affected unit is operating, except during periods of startup and shutdown during which time you must comply only with Table 3 to this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013]

§ 63.7501 Affirmative Defense for Violation of Emission Standards During Malfunction.

In response to an action to enforce the standards set forth in § 63.7500 you may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined at § 63.2. Appropriate penalties may be assessed if you fail to meet your burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(a) *Assertion of affirmative defense.* To establish the affirmative defense in any action to enforce such a standard, you must timely meet the reporting requirements in paragraph (b) of this section, and must prove by a preponderance of evidence that:

(1) The violation:

(i) Was caused by a sudden, infrequent, and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner; and

(ii) Could not have been prevented through careful planning, proper design, or better operation and maintenance practices; and

(iii) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and

(iv) Was not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

(2) Repairs were made as expeditiously as possible when a violation occurred; and

(3) The frequency, amount, and duration of the violation (including any bypass) were minimized to the maximum extent practicable; and

(4) If the violation resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(5) All possible steps were taken to minimize the impact of the violation on ambient air quality, the environment, and human health; and

(6) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and

(7) All of the actions in response to the violation were documented by properly signed, contemporaneous operating logs; and

(8) At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions; and

(9) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the violation resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of any emissions that were the result of the malfunction.

(b) *Report.* The owner or operator seeking to assert an affirmative defense shall submit a written report to the Administrator with all necessary supporting documentation, that it has met the requirements set forth in § 63.7500 of this section. This affirmative defense report shall be included in the first periodic compliance, deviation report or excess emission report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If such compliance, deviation report or excess emission report is due less than 45 days after the initial occurrence of the violation, the affirmative defense report may be included in the second compliance, deviation report or excess emission report due after the initial occurrence of the violation of the relevant standard.

[78 FR 7163, Jan. 31, 2013]

General Compliance Requirements

§ 63.7505 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limits, work practice standards, and operating limits in this subpart. These limits apply to you at all times the affected unit is operating except for the periods noted in § 63.7500(f).

(b) [Reserved]

(c) You must demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or continuous monitoring systems (CMS), including a continuous emission monitoring system (CEMS), continuous opacity monitoring system (COMS), continuous parameter monitoring system (CPMS), or particulate matter continuous parameter monitoring system (PM CPMS), where applicable. You may demonstrate compliance with the applicable emission limit for hydrogen chloride (HCl), mercury, or total selected metals (TSM) using fuel analysis if the emission rate calculated according to § 63.7530(c) is less than the applicable emission limit. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) Otherwise, you must demonstrate compliance for HCl, mercury, or TSM using performance testing, if subject to an applicable emission limit listed in Tables 1, 2, or 11 through 13 to this subpart.

(d) If you demonstrate compliance with any applicable emission limit through performance testing and subsequent compliance with operating limits (including the use of CPMS), or with a CEMS, or COMS, you must develop a site-

specific monitoring plan according to the requirements in paragraphs (d)(1) through (4) of this section for the use of any CEMS, COMS, or CPMS. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under § 63.8(f).

(1) For each CMS required in this section (including CEMS, COMS, or CPMS), you must develop, and submit to the Administrator for approval upon request, a site-specific monitoring plan that addresses design, data collection, and the quality assurance and quality control elements outlined in § 63.8(d) and the elements described in paragraphs (d)(1)(i) through (iii) of this section. You must submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation of your CMS. This requirement to develop and submit a site specific monitoring plan does not apply to affected sources with existing CEMS or COMS operated according to the performance specifications under appendix B to part 60 of this chapter and that meet the requirements of § 63.7525. Using the process described in § 63.8(f)(4), you may request approval of alternative monitoring system quality assurance and quality control procedures in place of those specified in this paragraph and, if approved, include the alternatives in your site-specific monitoring plan.

(i) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations, accuracy audits, analytical drift).

(2) In your site-specific monitoring plan, you must also address paragraphs (d)(2)(i) through (iii) of this section.

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1)(ii), (c)(3), and (c)(4)(ii);

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d); and

(iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c) (as applicable in Table 10 to this subpart), (e)(1), and (e)(2)(i).

(3) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan.

(4) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7164, Jan. 31, 2013]

Testing, Fuel Analyses, and Initial Compliance Requirements

§ 63.7510 What are my initial compliance requirements and by what date must I conduct them?

(a) For each boiler or process heater that is required or that you elect to demonstrate compliance with any of the applicable emission limits in Tables 1 or 2 or 11 through 13 of this subpart through performance testing, your initial compliance requirements include all the following:

(1) Conduct performance tests according to § 63.7520 and Table 5 to this subpart.

(2) Conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart, except as specified in paragraphs (a)(2)(i) through (iii) of this section.

(i) For each boiler or process heater that burns a single type of fuel, you are not required to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart. For purposes of this subpart, units that use a supplemental fuel only for startup, unit shutdown, and transient flame

stability purposes still qualify as units that burn a single type of fuel, and the supplemental fuel is not subject to the fuel analysis requirements under § 63.7521 and Table 6 to this subpart.

(ii) When natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels, you are not required to conduct a fuel analysis of those fuels according to § 63.7521 and Table 6 to this subpart. If gaseous fuels other than natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels and those gaseous fuels are subject to another subpart of this part, part 60, part 61, or part 65, you are not required to conduct a fuel analysis of those fuels according to § 63.7521 and Table 6 to this subpart.

(iii) You are not required to conduct a chlorine fuel analysis for any gaseous fuels. You must conduct a fuel analysis for mercury on gaseous fuels unless the fuel is exempted in paragraphs (a)(2)(i) and (ii) of this section.

(3) Establish operating limits according to § 63.7530 and Table 7 to this subpart.

(4) Conduct CMS performance evaluations according to § 63.7525.

(b) For each boiler or process heater that you elect to demonstrate compliance with the applicable emission limits in Tables 1 or 2 or 11 through 13 to this subpart for HCl, mercury, or TSM through fuel analysis, your initial compliance requirement is to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart and establish operating limits according to § 63.7530 and Table 8 to this subpart. The fuels described in paragraph (a)(2)(i) and (ii) of this section are exempt from these fuel analysis and operating limit requirements. The fuels described in paragraph (a)(2)(ii) of this section are exempt from the chloride fuel analysis and operating limit requirements. Boilers and process heaters that use a CEMS for mercury or HCl are exempt from the performance testing and operating limit requirements specified in paragraph (a) of this section for the HAP for which CEMS are used.

(c) If your boiler or process heater is subject to a carbon monoxide (CO) limit, your initial compliance demonstration for CO is to conduct a performance test for CO according to Table 5 to this subpart or conduct a performance evaluation of your continuous CO monitor, if applicable, according to § 63.7525(a). Boilers and process heaters that use a CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 12, or 11 through 13 to this subpart, as specified in § 63.7525(a), are exempt from the initial CO performance testing and oxygen concentration operating limit requirements specified in paragraph (a) of this section.

(d) If your boiler or process heater is subject to a PM limit, your initial compliance demonstration for PM is to conduct a performance test in accordance with § 63.7520 and Table 5 to this subpart.

(e) For existing affected sources (as defined in § 63.7490), you must complete the initial compliance demonstration, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the compliance date that is specified for your source in § 63.7495 and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart, except as specified in paragraph (j) of this section. You must complete an initial tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) no later than the compliance date specified in § 63.7495, except as specified in paragraph (j) of this section. You must complete the one-time energy assessment specified in Table 3 to this subpart no later than the compliance date specified in § 63.7495, except as specified in paragraph (j) of this section.

(f) For new or reconstructed affected sources (as defined in § 63.7490), you must complete the initial compliance demonstration with the emission limits no later than July 30, 2013 or within 180 days after startup of the source, whichever is later. If you are demonstrating compliance with an emission limit in Tables 11 through 13 to this subpart that is less stringent (that is, higher) than the applicable emission limit in Table 1 to this subpart, you must demonstrate compliance with the applicable emission limit in Table 1 no later than July 29, 2016.

(g) For new or reconstructed affected sources (as defined in § 63.7490), you must demonstrate initial compliance with the applicable work practice standards in Table 3 to this subpart within the applicable annual, biennial, or 5-year schedule as specified in § 63.7540(a) following the initial compliance date specified in § 63.7495(a). Thereafter, you are required to complete the applicable annual, biennial, or 5-year tune-up as specified in § 63.7540(a).

(h) For affected sources (as defined in § 63.7490) that ceased burning solid waste consistent with § 63.7495(e) and for which the initial compliance date has passed, you must demonstrate compliance within 60 days of the effective

date of the waste-to-fuel switch. If you have not conducted your compliance demonstration for this subpart within the previous 12 months, you must complete all compliance demonstrations for this subpart before you commence or recommence combustion of solid waste.

(i) For an existing EGU that becomes subject after January 31, 2013, you must demonstrate compliance within 180 days after becoming an affected source.

(j) For existing affected sources (as defined in § 63.7490) that have not operated between the effective date of the rule and the compliance date that is specified for your source in § 63.7495, you must complete the initial compliance demonstration, if subject to the emission limits in Table 2 to this subpart, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the re-start of the affected source and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart. You must complete an initial tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) no later than 30 days after the re-start of the affected source and, if applicable, complete the one-time energy assessment specified in Table 3 to this subpart, no later than the compliance date specified in § 63.7495.

[78 FR 7164, Jan. 31, 2013]

§ 63.7515 When must I conduct subsequent performance tests, fuel analyses, or tune-ups?

(a) You must conduct all applicable performance tests according to § 63.7520 on an annual basis, except as specified in paragraphs (b) through (e), (g), and (h) of this section. Annual performance tests must be completed no more than 13 months after the previous performance test, except as specified in paragraphs (b) through (e), (g), and (h) of this section.

(b) If your performance tests for a given pollutant for at least 2 consecutive years show that your emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Tables 1 and 2 or 11 through 13 to this subpart, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, you may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test. If you elect to demonstrate compliance using emission averaging under § 63.7522, you must continue to conduct performance tests annually. The requirement to test at maximum chloride input level is waived unless the stack test is conducted for HCl. The requirement to test at maximum mercury input level is waived unless the stack test is conducted for mercury. The requirement to test at maximum TSM input level is waived unless the stack test is conducted for TSM.

(c) If a performance test shows emissions exceeded the emission limit or 75 percent of the emission limit (as specified in Tables 1 and 2 or 11 through 13 to this subpart) for a pollutant, you must conduct annual performance tests for that pollutant until all performance tests over a consecutive 2-year period meet the required level (at or below 75 percent of the emission limit, as specified in Tables 1 and 2 or 11 through 13 to this subpart).

(d) If you are required to meet an applicable tune-up work practice standard, you must conduct an annual, biennial, or 5-year performance tune-up according to § 63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in § 63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in § 63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in § 63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in § 63.7490), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after the initial startup of the new or reconstructed affected source.

(e) If you demonstrate compliance with the mercury, HCl, or TSM based on fuel analysis, you must conduct a monthly fuel analysis according to § 63.7521 for each type of fuel burned that is subject to an emission limit in Tables 1, 2, or 11 through 13 to this subpart. You may comply with this monthly requirement by completing the fuel analysis any time within the calendar month as long as the analysis is separated from the previous analysis by at least 14 calendar days. If you burn a new type of fuel, you must conduct a fuel analysis before burning the new type of fuel in your boiler or process heater. You must still meet all applicable continuous compliance requirements in § 63.7540. If each of 12 consecutive monthly fuel analyses demonstrates 75 percent or less of the compliance level, you may decrease the fuel analysis frequency to quarterly for that fuel. If any quarterly sample exceeds 75 percent of the compliance

level or you begin burning a new type of fuel, you must return to monthly monitoring for that fuel, until 12 months of fuel analyses are again less than 75 percent of the compliance level.

(f) You must report the results of performance tests and the associated fuel analyses within 60 days after the completion of the performance tests. This report must also verify that the operating limits for each boiler or process heater have not changed or provide documentation of revised operating limits established according to § 63.7530 and Table 7 to this subpart, as applicable. The reports for all subsequent performance tests must include all applicable information required in § 63.7550.

(g) For affected sources (as defined in § 63.7490) that have not operated since the previous compliance demonstration and more than one year has passed since the previous compliance demonstration, you must complete the subsequent compliance demonstration, if subject to the emission limits in Tables 1, 2, or 11 through 13 to this subpart, no later than 180 days after the re-start of the affected source and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart. You must complete a subsequent tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) and the schedule described in § 63.7540(a)(13) for units that are not operating at the time of their scheduled tune-up.

(h) If your affected boiler or process heater is in the unit designed to burn light liquid subcategory and you combust ultra low sulfur liquid fuel, you do not need to conduct further performance tests if the pollutants measured during the initial compliance performance tests meet the emission limits in Tables 1 or 2 of this subpart providing you demonstrate ongoing compliance with the emissions limits by monitoring and recording the type of fuel combusted on a monthly basis. If you intend to use a fuel other than ultra low sulfur liquid fuel, natural gas, refinery gas, or other gas 1 fuel, you must conduct new performance tests within 60 days of burning the new fuel type.

(i) If you operate a CO CEMS that meets the Performance Specifications outlined in § 63.7525(a)(3) of this subpart to demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, you are not required to conduct CO performance tests and are not subject to the oxygen concentration operating limit requirement specified in § 63.7510(a).

[78 FR 7165, Jan. 31, 2013]

§ 63.7520 What stack tests and procedures must I use?

(a) You must conduct all performance tests according to § 63.7(c), (d), (f), and (h). You must also develop a site-specific stack test plan according to the requirements in § 63.7(c). You shall conduct all performance tests under such conditions as the Administrator specifies to you based on the representative performance of each boiler or process heater for the period being tested. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests.

(b) You must conduct each performance test according to the requirements in Table 5 to this subpart.

(c) You must conduct each performance test under the specific conditions listed in Tables 5 and 7 to this subpart. You must conduct performance tests at representative operating load conditions while burning the type of fuel or mixture of fuels that has the highest content of chlorine and mercury, and TSM if you are opting to comply with the TSM alternative standard and you must demonstrate initial compliance and establish your operating limits based on these performance tests. These requirements could result in the need to conduct more than one performance test. Following each performance test and until the next performance test, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(d) You must conduct a minimum of three separate test runs for each performance test required in this section, as specified in § 63.7(e)(3). Each test run must comply with the minimum applicable sampling times or volumes specified in Tables 1 and 2 or 11 through 13 to this subpart.

(e) To determine compliance with the emission limits, you must use the F-Factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 at 40 CFR part 60, appendix A-7 of this chapter to convert the measured particulate matter (PM) concentrations, the measured HCl concentrations, the measured mercury concentrations, and the measured TSM concentrations that result from the performance test to pounds per million Btu heat input emission rates.

(f) Except for a 30-day rolling average based on CEMS (or sorbent trap monitoring system) data, if measurement results for any pollutant are reported as below the method detection level (e.g., laboratory analytical results for one or more sample components are below the method defined analytical detection level), you must use the method detection level as the measured emissions level for that pollutant in calculating compliance. The measured result for a multiple component analysis (e.g., analytical values for multiple Method 29 fractions both for individual HAP metals and for total HAP metals) may include a combination of method detection level data and analytical data reported above the method detection level.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7166, Jan. 31, 2013]

§ 63.7521 What fuel analyses, fuel specification, and procedures must I use?

(a) For solid and liquid fuels, you must conduct fuel analyses for chloride and mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. For solid fuels and liquid fuels, you must also conduct fuel analyses for TSM if you are opting to comply with the TSM alternative standard. For gas 2 (other) fuels, you must conduct fuel analyses for mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) For purposes of complying with this section, a fuel gas system that consists of multiple gaseous fuels collected and mixed with each other is considered a single fuel type and sampling and analysis is only required on the combined fuel gas system that will feed the boiler or process heater. Sampling and analysis of the individual gaseous streams prior to combining is not required. You are not required to conduct fuel analyses for fuels used for only startup, unit shutdown, and transient flame stability purposes. You are required to conduct fuel analyses only for fuels and units that are subject to emission limits for mercury, HCl, or TSM in Tables 1 and 2 or 11 through 13 to this subpart. Gaseous and liquid fuels are exempt from the sampling requirements in paragraphs (c) and (d) of this section and Table 6 to this subpart.

(b) You must develop a site-specific fuel monitoring plan according to the following procedures and requirements in paragraphs (b)(1) and (2) of this section, if you are required to conduct fuel analyses as specified in § 63.7510.

(1) If you intend to use an alternative analytical method other than those required by Table 6 to this subpart, you must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in § 63.7510.

(2) You must include the information contained in paragraphs (b)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all fuel types anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the notification of whether you or a fuel supplier will be conducting the fuel analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the composite samples if your procedures are different from paragraph (c) or (d) of this section. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types.

(iv) For each anticipated fuel type, the analytical methods from Table 6, with the expected minimum detection levels, to be used for the measurement of chlorine or mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 shall be used until the requested alternative is approved.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart.

(c) At a minimum, you must obtain three composite fuel samples for each fuel type according to the procedures in paragraph (c)(1) or (2) of this section, or the methods listed in Table 6 to this subpart, or use an automated sampling

mechanism that provides representative composite fuel samples for each fuel type that includes both coarse and fine material.

(1) If sampling from a belt (or screw) feeder, collect fuel samples according to paragraphs (c)(1)(i) and (ii) of this section.

(i) Stop the belt and withdraw a 6-inch wide sample from the full cross-section of the stopped belt to obtain a minimum two pounds of sample. You must collect all the material (fines and coarse) in the full cross-section. You must transfer the sample to a clean plastic bag.

(ii) Each composite sample will consist of a minimum of three samples collected at approximately equal one-hour intervals during the testing period for sampling during performance stack testing. For monthly sampling, each composite sample shall be collected at approximately equal 10-day intervals during the month.

(2) If sampling from a fuel pile or truck, you must collect fuel samples according to paragraphs (c)(2)(i) through (iii) of this section.

(i) For each composite sample, you must select a minimum of five sampling locations uniformly spaced over the surface of the pile.

(ii) At each sampling site, you must dig into the pile to a uniform depth of approximately 18 inches. You must insert a clean shovel into the hole and withdraw a sample, making sure that large pieces do not fall off during sampling; use the same shovel to collect all samples.

(iii) You must transfer all samples to a clean plastic bag for further processing.

(d) You must prepare each composite sample according to the procedures in paragraphs (d)(1) through (7) of this section.

(1) You must thoroughly mix and pour the entire composite sample over a clean plastic sheet.

(2) You must break large sample pieces (e.g., larger than 3 inches) into smaller sizes.

(3) You must make a pie shape with the entire composite sample and subdivide it into four equal parts.

(4) You must separate one of the quarter samples as the first subset.

(5) If this subset is too large for grinding, you must repeat the procedure in paragraph (d)(3) of this section with the quarter sample and obtain a one-quarter subset from this sample.

(6) You must grind the sample in a mill.

(7) You must use the procedure in paragraph (d)(3) of this section to obtain a one-quarter subsample for analysis. If the quarter sample is too large, subdivide it further using the same procedure.

(e) You must determine the concentration of pollutants in the fuel (mercury and/or chlorine and/or TSM) in units of pounds per million Btu of each composite sample for each fuel type according to the procedures in Table 6 to this subpart, for use in Equations 7, 8, and 9 of this subpart.

(f) To demonstrate that a gaseous fuel other than natural gas or refinery gas qualifies as an other gas 1 fuel, as defined in § 63.7575, you must conduct a fuel specification analyses for mercury according to the procedures in paragraphs (g) through (i) of this section and Table 6 to this subpart, as applicable, except as specified in paragraph (f)(1) through (4) of this section.

(1) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for natural gas or refinery gas.

(2) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gaseous fuels that are subject to another subpart of this part, part 60, part 61, or part 65.

(3) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section on gaseous fuels for units that are complying with the limits for units designed to burn gas 2 (other) fuels.

(4) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gas streams directly derived from natural gas at natural gas production sites or natural gas plants.

(g) You must develop and submit a site-specific fuel analysis plan for other gas 1 fuels to the EPA Administrator for review and approval according to the following procedures and requirements in paragraphs (g)(1) and (2) of this section.

(1) If you intend to use an alternative analytical method other than those required by Table 6 to this subpart, you must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in § 63.7510.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all gaseous fuel types other than those exempted from fuel specification analysis under (f)(1) through (3) of this section anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the notification of whether you or a fuel supplier will be conducting the fuel specification analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the samples if your procedures are different from the sampling methods contained in Table 6 to this subpart. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types. If multiple boilers or process heaters are fueled by a common fuel stream it is permissible to conduct a single gas specification at the common point of gas distribution.

(iv) For each anticipated fuel type, the analytical methods from Table 6 to this subpart, with the expected minimum detection levels, to be used for the measurement of mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 to this subpart shall be used until the requested alternative is approved.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart.

(h) You must obtain a single fuel sample for each fuel type according to the sampling procedures listed in Table 6 for fuel specification of gaseous fuels.

(i) You must determine the concentration in the fuel of mercury, in units of microgram per cubic meter, dry basis, of each sample for each other gas 1 fuel type according to the procedures in Table 6 to this subpart.

[78 FR 7167, Jan. 31, 2013]

§ 63.7522 Can I use emissions averaging to comply with this subpart?

(a) As an alternative to meeting the requirements of § 63.7500 for PM (or TSM), HCl, or mercury on a boiler or process heater-specific basis, if you have more than one existing boiler or process heater in any subcategories located at your facility, you may demonstrate compliance by emissions averaging, if your averaged emissions are not

more than 90 percent of the applicable emission limit, according to the procedures in this section. You may not include new boilers or process heaters in an emissions average.

(b) For a group of two or more existing boilers or process heaters in the same subcategory that each vent to a separate stack, you may average PM (or TSM), HCl, or mercury emissions among existing units to demonstrate compliance with the limits in Table 2 to this subpart as specified in paragraph (b)(1) through (3) of this section, if you satisfy the requirements in paragraphs (c) through (g) of this section.

(1) You may average units using a CEMS or PM CPMS for demonstrating compliance.

(2) For mercury and HCl, averaging is allowed as follows:

(i) You may average among units in any of the solid fuel subcategories.

(ii) You may average among units in any of the liquid fuel subcategories.

(iii) You may average among units in a subcategory of units designed to burn gas 2 (other) fuels.

(iv) You may not average across the units designed to burn liquid, units designed to burn solid fuel, and units designed to burn gas 2 (other) subcategories.

(3) For PM (or TSM), averaging is only allowed between units within each of the following subcategories and you may not average across subcategories:

(i) Units designed to burn coal/solid fossil fuel.

(ii) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solids.

(iii) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solids.

(iv) Fluidized bed units designed to burn biomass/bio-based solid.

(v) Suspension burners designed to burn biomass/bio-based solid.

(vi) Dutch ovens/pile burners designed to burn biomass/bio-based solid.

(vii) Fuel Cells designed to burn biomass/bio-based solid.

(viii) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.

(ix) Units designed to burn heavy liquid fuel.

(x) Units designed to burn light liquid fuel.

(xi) Units designed to burn liquid fuel that are non-continental units.

(xii) Units designed to burn gas 2 (other) gases.

(c) For each existing boiler or process heater in the averaging group, the emission rate achieved during the initial compliance test for the HAP being averaged must not exceed the emission level that was being achieved on January 31, 2013 or the control technology employed during the initial compliance test must not be less effective for the HAP being averaged than the control technology employed on January 31, 2013.

(d) The averaged emissions rate from the existing boilers and process heaters participating in the emissions averaging option must not exceed 90 percent of the limits in Table 2 to this subpart at all times the affected units are operating following the compliance date specified in § 63.7495.

(e) You must demonstrate initial compliance according to paragraph (e)(1) or (2) of this section using the maximum rated heat input capacity or maximum steam generation capacity of each unit and the results of the initial performance tests or fuel analysis.

(1) You must use Equation 1a or 1b or 1c of this section to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option for that pollutant do not exceed the emission limits in Table 2 to this subpart. Use Equation 1a if you are complying with the emission limits on a heat input basis, use Equation 1b if you are complying with the emission limits on a steam generation (output) basis, and use Equation 1c if you are complying with the emission limits on a electric generation (output) basis.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Hm) \div \sum_{i=1}^{n} Hm \qquad \text{(Eq.1a)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c).

Hm = Maximum rated heat input capacity of unit, i, in units of million Btu per hour.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times So) \div \sum_{i=1}^{n} So \qquad \text{(Eq.1b)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c). If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, Eadj, determined according to § 63.7533 for that unit.

So = Maximum steam output capacity of unit, i, in units of million Btu per hour, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Eo) \div \sum_{i=1}^{n} Eo \qquad \text{(Eq.1c)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c). If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, Eadj, determined according to § 63.7533 for that unit.

Eo = Maximum electric generating output capacity of unit, i, in units of megawatt hour, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of determining the maximum rated heat input capacity of one or more boilers that generate steam, you may use Equation 2 of this section as an alternative to using Equation 1a of this section to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option do not exceed the emission limits for that pollutant in Table 2 to this subpart that are in pounds per million Btu of heat input.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n}(Er \times Sm \times Cfi) \div \sum_{i=1}^{n}(Sm \times Cfi) \quad \text{(Eq. 2)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c).

Sm = Maximum steam generation capacity by unit, i, in units of pounds per hour.

Cfi = Conversion factor, calculated from the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for unit, i.

1.1 = Required discount factor.

(f) After the initial compliance demonstration described in paragraph (e) of this section, you must demonstrate compliance on a monthly basis determined at the end of every month (12 times per year) according to paragraphs (f)(1) through (3) of this section. The first monthly period begins on the compliance date specified in § 63.7495. If the affected source elects to collect monthly data for up the 11 months preceding the first monthly period, these additional data points can be used to compute the 12-month rolling average in paragraph (f)(3) of this section.

(1) For each calendar month, you must use Equation 3a or 3b or 3c of this section to calculate the average weighted emission rate for that month. Use Equation 3a and the actual heat input for the month for each existing unit participating in the emissions averaging option if you are complying with emission limits on a heat input basis. Use Equation 3b and the actual steam generation for the month if you are complying with the emission limits on a steam generation (output) basis. Use Equation 3c and the actual steam generation for the month if you are complying with the emission limits on a electrical generation (output) basis.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Hb) \div \sum_{i=1}^{n} Hb \qquad \text{(Eq. 3a)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Hb = The heat input for that calendar month to unit, i, in units of million Btu.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times So) \div \sum_{i=1}^{n} So \qquad \text{(Eq. 3b)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart. If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, E_{adj} , determined according to § 63.7533 for that unit.

So = The steam output for that calendar month from unit, i, in units of million Btu, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Eo) \div \sum_{i=1}^{n} Eo \qquad \text{(Eq. 3c)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart. If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, E_{adj} , determined according to § 63.7533 for that unit.

Eo = The electric generating output for that calendar month from unit, i, in units of megawatt hour, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of monitoring heat input, you may use Equation 4 of this section as an alternative to using Equation 3a of this section to calculate the average weighted emission rate using the actual steam generation from the boilers participating in the emissions averaging option.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Sa \times Cfi) \div \sum_{i=1}^{n} (Sa \times Cfi) \quad \text{(Eq. 4)}$$

Where:

AveWeightedEmissions = average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Sa = Actual steam generation for that calendar month by boiler, i, in units of pounds.

Cfi = Conversion factor, as calculated during the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for boiler, i.

1.1 = Required discount factor.

(3) Until 12 monthly weighted average emission rates have been accumulated, calculate and report only the average weighted emission rate determined under paragraph (f)(1) or (2) of this section for each calendar month. After 12 monthly weighted average emission rates have been accumulated, for each subsequent calendar month, use Equation 5 of this section to calculate the 12-month rolling average of the monthly weighted average emission rates for the current calendar month and the previous 11 calendar months.

$$Eavg = \sum_{i=1}^{n} ERi \div 12 \quad \text{(Eq. 5)}$$

Where:

Eavg = 12-month rolling average emission rate, (pounds per million Btu heat input)

ERi = Monthly weighted average, for calendar month “i” (pounds per million Btu heat input), as calculated by paragraph (f)(1) or (2) of this section.

(g) You must develop, and submit upon request to the applicable Administrator for review and approval, an implementation plan for emission averaging according to the following procedures and requirements in paragraphs (g)(1) through (4) of this section.

(1) You must submit the implementation plan no later than 180 days before the date that the facility intends to demonstrate compliance using the emission averaging option.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vii) of this section in your implementation plan for all emission sources included in an emissions average:

(i) The identification of all existing boilers and process heaters in the averaging group, including for each either the applicable HAP emission level or the control technology installed as of January 31, 2013 and the date on which you are requesting emission averaging to commence;

(ii) The process parameter (heat input or steam generated) that will be monitored for each averaging group;

(iii) The specific control technology or pollution prevention measure to be used for each emission boiler or process heater in the averaging group and the date of its installation or application. If the pollution prevention measure reduces or eliminates emissions from multiple boilers or process heaters, the owner or operator must identify each boiler or process heater;

(iv) The test plan for the measurement of PM (or TSM), HCl, or mercury emissions in accordance with the requirements in § 63.7520;

(v) The operating parameters to be monitored for each control system or device consistent with § 63.7500 and Table 4, and a description of how the operating limits will be determined;

(vi) If you request to monitor an alternative operating parameter pursuant to § 63.7525, you must also include:

(A) A description of the parameter(s) to be monitored and an explanation of the criteria used to select the parameter(s); and

(B) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device; the frequency and content of monitoring, reporting, and recordkeeping requirements; and a demonstration, to the satisfaction of the Administrator, that the proposed monitoring frequency is sufficient to represent control device operating conditions; and

(vii) A demonstration that compliance with each of the applicable emission limit(s) will be achieved under representative operating load conditions. Following each compliance demonstration and until the next compliance demonstration, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(3) The Administrator shall review and approve or disapprove the plan according to the following criteria:

(i) Whether the content of the plan includes all of the information specified in paragraph (g)(2) of this section; and

(ii) Whether the plan presents sufficient information to determine that compliance will be achieved and maintained.

(4) The applicable Administrator shall not approve an emission averaging implementation plan containing any of the following provisions:

(i) Any averaging between emissions of differing pollutants or between differing sources; or

(ii) The inclusion of any emission source other than an existing unit in the same subcategories.

(h) For a group of two or more existing affected units, each of which vents through a single common stack, you may average PM (or TSM), HCl, or mercury emissions to demonstrate compliance with the limits for that pollutant in Table 2 to this subpart if you satisfy the requirements in paragraph (i) or (j) of this section.

(i) For a group of two or more existing units in the same subcategories, each of which vents through a common emissions control system to a common stack, that does not receive emissions from units in other subcategories or categories, you may treat such averaging group as a single existing unit for purposes of this subpart and comply with the requirements of this subpart as if the group were a single unit.

(j) For all other groups of units subject to the common stack requirements of paragraph (h) of this section, including situations where the exhaust of affected units are each individually controlled and then sent to a common stack, the owner or operator may elect to:

(1) Conduct performance tests according to procedures specified in § 63.7520 in the common stack if affected units from other subcategories vent to the common stack. The emission limits that the group must comply with are determined by the use of Equation 6 of this section.

$$En = \sum_{i=1}^{n} (ELi \times Hi) \div \sum_{i=1}^{n} Hi \qquad \text{(Eq. 6)}$$

Where:

En = HAP emission limit, pounds per million British thermal units (lb/MMBtu), parts per million (ppm), or nanograms per dry standard cubic meter (ng/dscm).

ELi = Appropriate emission limit from Table 2 to this subpart for unit i, in units of lb/MMBtu, ppm or ng/dscm.

Hi = Heat input from unit i, MMBtu.

(2) Conduct performance tests according to procedures specified in § 63.7520 in the common stack. If affected units and non-affected units vent to the common stack, the non-affected units must be shut down or vented to a different stack during the performance test unless the facility determines to demonstrate compliance with the non-affected units venting to the stack; and

(3) Meet the applicable operating limit specified in § 63.7540 and Table 8 to this subpart for each emissions control system (except that, if each unit venting to the common stack has an applicable opacity operating limit, then a single continuous opacity monitoring system may be located in the common stack instead of in each duct to the common stack).

(k) The common stack of a group of two or more existing boilers or process heaters in the same subcategories subject to paragraph (h) of this section may be treated as a separate stack for purposes of paragraph (b) of this section and included in an emissions averaging group subject to paragraph (b) of this section.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7168, Jan. 31, 2013]

§ 63.7525 What are my monitoring, installation, operation, and maintenance requirements?

(a) If your boiler or process heater is subject to a CO emission limit in Tables 1, 2, or 11 through 13 to this subpart, you must install, operate, and maintain an oxygen analyzer system, as defined in § 63.7575, or install, certify, operate and maintain continuous emission monitoring systems for CO and oxygen according to the procedures in paragraphs (a)(1) through (7) of this section.

(1) Install the CO CEMS and oxygen analyzer by the compliance date specified in § 63.7495. The CO and oxygen levels shall be monitored at the same location at the outlet of the boiler or process heater.

(2) To demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, you must install, certify, operate, and maintain a CO CEMS and an oxygen analyzer according to the applicable procedures under Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, the site-specific monitoring plan developed according to § 63.7505(d), and the requirements in § 63.7540(a)(8) and paragraph (a) of this section. Any boiler or process heater that has a CO CEMS that is compliant with Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, a site-specific monitoring plan developed according to § 63.7505(d), and the requirements in § 63.7540(a)(8) and paragraph (a) of this section must use the CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart.

(i) You must conduct a performance evaluation of each CO CEMS according to the requirements in § 63.8(e) and according to Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B.

(ii) During each relative accuracy test run of the CO CEMS, you must be collect emission data for CO concurrently (or within a 30- to 60-minute period) by both the CO CEMS and by Method 10, 10A, or 10B at 40 CFR part 60, appendix A-4. The relative accuracy testing must be at representative operating conditions.

(iii) You must follow the quality assurance procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) of Procedure 1 of appendix F to part 60. The measurement span value of the CO CEMS must be two times the applicable CO emission limit, expressed as a concentration.

(iv) Any CO CEMS that does not comply with § 63.7525(a) cannot be used to meet any requirement in this subpart to demonstrate compliance with a CO emission limit listed in Tables 1, 2, or 11 through 13 to this subpart.

(v) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(3) Complete a minimum of one cycle of CO and oxygen CEMS operation (sampling, analyzing, and data recording) for each successive 15-minute period. Collect CO and oxygen data concurrently. Collect at least four CO and oxygen CEMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CEMS calibration, quality assurance, or maintenance activities are being performed.

(4) Reduce the CO CEMS data as specified in § 63.8(g)(2).

(5) Calculate one-hour arithmetic averages, corrected to 3 percent oxygen from each hour of CO CEMS data in parts per million CO concentration. The one-hour arithmetic averages required shall be used to calculate the 30-day or 10-day rolling average emissions. Use Equation 19-19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A-7 for calculating the average CO concentration from the hourly values.

(6) For purposes of collecting CO data, operate the CO CEMS as specified in § 63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in § 63.7535(c). Periods when CO data are unavailable may constitute monitoring deviations as specified in § 63.7535(d).

(7) Operate an oxygen trim system with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test as the operating limit for oxygen according to Table 7 to this subpart.

(b) If your boiler or process heater is in the unit designed to burn coal/solid fossil fuel subcategory or the unit designed to burn heavy liquid subcategory and has an average annual heat input rate greater than 250 MMBtu per hour from solid fossil fuel and/or heavy liquid, and you demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, certify, maintain, and operate a PM CPMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (b)(1) through (4) of this section. As an alternative to use of a PM CPMS to demonstrate compliance with the PM limit, you may choose to use a PM CEMS. If you choose to use a PM CEMS to demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, certify, maintain, and operate a PM CEMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraph (b)(5) through (8) of this section. For other boilers or process heaters, you may elect to use a PM CPMS or PM CEMS operated in accordance with this section in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure). Owners of boilers and process heaters who elect to comply with the alternative TSM limit are not required to install a PM CPMS.

(1) Install, certify, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with § 63.7505(d), the requirements in § 63.7540(a)(9), and paragraphs (b)(1)(i) through (iii) of this section.

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation detection of PM in the exhaust gas or representative exhaust gas sample. The reportable measurement output from the PM CPMS must be expressed as milliamps.

(ii) The PM CPMS must have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.

(iii) The PM CPMS must be capable of detecting and responding to PM concentrations of no greater than 0.5 milligram per actual cubic meter.

(2) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(3) Collect PM CPMS hourly average output data for all boiler or process heater operating hours except as indicated in § 63.7535(a) through (d). Express the PM CPMS output as milliamps.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output data collected during all boiler or process heater operating hours (milliamps).

(5) Install, certify, operate, and maintain your PM CEMS according to the procedures in your approved site-specific monitoring plan developed in accordance with § 63.7505(d), the requirements in § 63.7540(a)(9), and paragraphs (b)(5)(i) through (iv) of this section.

(i) You shall conduct a performance evaluation of the PM CEMS according to the applicable requirements of § 60.8(e), and Performance Specification 11 at 40 CFR part 60, appendix B of this chapter.

(ii) During each PM correlation testing run of the CEMS required by Performance Specification 11 at 40 CFR part 60, appendix B of this chapter, you shall collect PM and oxygen (or carbon dioxide) data concurrently (or within a 30-to 60-minute period) by both the CEMS and conducting performance tests using Method 5 at 40 CFR part 60, appendix A-3 or Method 17 at 40 CFR part 60, appendix A-6 of this chapter.

(iii) You shall perform quarterly accuracy determinations and daily calibration drift tests in accordance with Procedure 2 at 40 CFR part 60, appendix F of this chapter. You must perform Relative Response Audits annually and perform Response Correlation Audits every 3 years.

(iv) Within 60 days after the date of completing each CEMS relative accuracy test audit or performance test conducted to demonstrate compliance with this subpart, you must submit the relative accuracy test audit data and performance test data to the EPA by successfully submitting the data electronically into the EPA's Central Data Exchange by using the Electronic Reporting Tool (see *http://www.epa.gov/ttn/chief/ert/erttool.html/*).

(6) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(7) Collect PM CEMS hourly average output data for all boiler or process heater operating hours except as indicated in § 63.7535(a) through (d).

(8) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all boiler or process heater operating hours.

(c) If you have an applicable opacity operating limit in this rule, and are not otherwise required or elect to install and operate a PM CPMS, PM CEMS, or a bag leak detection system, you must install, operate, certify and maintain each COMS according to the procedures in paragraphs (c)(1) through (7) of this section by the compliance date specified in § 63.7495.

(1) Each COMS must be installed, operated, and maintained according to Performance Specification 1 at appendix B to part 60 of this chapter.

(2) You must conduct a performance evaluation of each COMS according to the requirements in § 63.8(e) and according to Performance Specification 1 at appendix B to part 60 of this chapter.

(3) As specified in § 63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) The COMS data must be reduced as specified in § 63.8(g)(2).

(5) You must include in your site-specific monitoring plan procedures and acceptance criteria for operating and maintaining each COMS according to the requirements in § 63.8(d). At a minimum, the monitoring plan must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS.

(6) You must operate and maintain each COMS according to the requirements in the monitoring plan and the requirements of § 63.8(e). You must identify periods the COMS is out of control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit. Any 6-minute period for which the monitoring system is out of control and data are not available for a required calculation constitutes a deviation from the monitoring requirements.

(7) You must determine and record all the 6-minute averages (and daily block averages as applicable) collected for periods during which the COMS is not out of control.

(d) If you have an operating limit that requires the use of a CMS other than a PM CPMS or COMS, you must install, operate, and maintain each CMS according to the procedures in paragraphs (d)(1) through (5) of this section by the compliance date specified in § 63.7495.

(1) The CPMS must complete a minimum of one cycle of operation every 15-minutes. You must have a minimum of four successive cycles of operation, one representing each of the four 15-minute periods in an hour, to have a valid hour of data.

(2) You must operate the monitoring system as specified in § 63.7535(b), and comply with the data calculation requirements specified in § 63.7535(c).

(3) Any 15-minute period for which the monitoring system is out-of-control and data are not available for a required calculation constitutes a deviation from the monitoring requirements. Other situations that constitute a monitoring deviation are specified in § 63.7535(d).

(4) You must determine the 30-day rolling average of all recorded readings, except as provided in § 63.7535(c).

(5) You must record the results of each inspection, calibration, and validation check.

(e) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (d) and (e)(1) through (4) of this section.

(1) You must install the flow sensor and other necessary equipment in a position that provides a representative flow.

(2) You must use a flow sensor with a measurement sensitivity of no greater than 2 percent of the design flow rate.

(3) You must minimize, consistent with good engineering practices, the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(4) You must conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(f) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (d) and (f)(1) through (6) of this section.

(1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (*e.g.* , PM scrubber pressure drop).

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion consistent with good engineering practices.

(3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.

(4) Perform checks at least once each process operating day to ensure pressure measurements are not obstructed (*e.g.* , check for pressure tap pluggage daily).

(5) Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in you monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(g) If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (d) and (g)(1) through (4) of this section.

(1) Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH.

(2) Ensure the sample is properly mixed and representative of the fluid to be measured.

(3) Conduct a performance evaluation of the pH monitoring system in accordance with your monitoring plan at least once each process operating day.

(4) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than quarterly.

(h) If you have an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator (ESP) operated with a wet scrubber, you must meet the requirements in paragraphs (h)(1) and (2) of this section.

(1) Install sensors to measure (secondary) voltage and current to the precipitator collection plates.

(2) Conduct a performance evaluation of the electric power monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(i) If you have an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (d) and (i)(1) through (2) of this section.

(1) Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate.

(2) Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(j) If you are not required to use a PM CPMS and elect to use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate the bag leak detection system as specified in paragraphs (j)(1) through (6) of this section.

(1) You must install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute PM loadings for each exhaust stack, roof vent, or compartment (e.g., for a positive pressure fabric filter) of the fabric filter.

(2) Conduct a performance evaluation of the bag leak detection system in accordance with your monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (incorporated by reference, see § 63.14).

(3) Use a bag leak detection system certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter or less.

(4) Use a bag leak detection system equipped with a device to record continuously the output signal from the sensor.

(5) Use a bag leak detection system equipped with a system that will alert plant operating personnel when an increase in relative PM emissions over a preset level is detected. The alert must easily recognizable (e.g., heard or seen) by plant operating personnel.

(6) Where multiple bag leak detectors are required, the system's instrumentation and alert may be shared among detectors.

(k) For each unit that meets the definition of limited-use boiler or process heater, you must keep fuel use records for the days the boiler or process heater was operating.

(l) For each unit for which you decide to demonstrate compliance with the mercury or HCl emissions limits in Tables 1 or 2 or 11 through 13 of this subpart by use of a CEMS for mercury or HCl, you must install, certify, maintain, and operate a CEMS measuring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (l)(1) through (8) of this section. For HCl, this option for an affected unit takes effect on the date a final performance specification for a HCl CEMS is published in the FEDERAL REGISTER or the date of approval of a site-specific monitoring plan.

(1) Notify the Administrator one month before starting use of the CEMS, and notify the Administrator one month before stopping use of the CEMS.

(2) Each CEMS shall be installed, certified, operated, and maintained according to the requirements in § 63.7540(a)(14) for a mercury CEMS and § 63.7540(a)(15) for a HCl CEMS.

(3) For a new unit, you must complete the initial performance evaluation of the CEMS by the latest of the dates specified in paragraph (l)(3)(i) through (iii) of this section.

(i) No later than July 30, 2013.

(ii) No later 180 days after the date of initial startup.

(iii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(4) For an existing unit, you must complete the initial performance evaluation by the latter of the two dates specified in paragraph (l)(4)(i) and (ii) of this section.

(i) No later than July 29, 2016.

(ii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(5) Compliance with the applicable emissions limit shall be determined based on the 30-day rolling average of the hourly arithmetic average emissions rates using the continuous monitoring system outlet data. The 30-day rolling arithmetic average emission rate (lb/MMBtu) shall be calculated using the equations in EPA Reference Method 19 at 40 CFR part 60, appendix A-7, but substituting the mercury or HCl concentration for the pollutant concentrations normally used in Method 19.

(6) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis. Collect at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

(7) The one-hour arithmetic averages required shall be expressed in lb/MMBtu and shall be used to calculate the boiler 30-day and 10-day rolling average emissions.

(8) You are allowed to substitute the use of the PM, mercury or HCl CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with the PM, mercury or HCl emissions limit, and if you are using an acid gas wet scrubber or dry sorbent injection control technology to comply with the HCl emission limit, you are allowed to substitute the use of a sulfur dioxide (SO_2) CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with HCl emissions limit.

(m) If your unit is subject to a HCl emission limit in Tables 1, 2, or 11 through 13 of this subpart and you have an acid gas wet scrubber or dry sorbent injection control technology and you use an SO_2 CEMS, you must install the monitor at the outlet of the boiler or process heater, downstream of all emission control devices, and you must install, certify, operate, and maintain the CEMS according to part 75 of this chapter.

(1) The SO_2 CEMS must be installed by the compliance date specified in § 63.7495.

(2) For on-going quality assurance (QA), the SO_2 CEMS must meet the applicable daily, quarterly, and semiannual or annual requirements in sections 2.1 through 2.3 of appendix B to part 75 of this chapter, with the following addition: You must perform the linearity checks required in section 2.2 of appendix B to part 75 of this chapter if the SO_2 CEMS has a span value of 30 ppm or less.

(3) For a new unit, the initial performance evaluation shall be completed no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, the initial performance evaluation shall be completed no later than July 29, 2016.

(4) For purposes of collecting SO_2 data, you must operate the SO_2 CEMS as specified in § 63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in § 63.7535(c). Periods when SO_2 data are unavailable may constitute monitoring deviations as specified in § 63.7535(d).

(5) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis.

(6) Use only unadjusted, quality-assured SO_2 concentration values in the emissions calculations; do not apply bias adjustment factors to the part 75 SO_2 data and do not use part 75 substitute data values.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7171, Jan. 31, 2013]

§ 63.7530 How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?

(a) You must demonstrate initial compliance with each emission limit that applies to you by conducting initial performance tests and fuel analyses and establishing operating limits, as applicable, according to § 63.7520, paragraphs (b) and (c) of this section, and Tables 5 and 7 to this subpart. The requirement to conduct a fuel analysis is not applicable for units that burn a single type of fuel, as specified by § 63.7510(a)(2)(i). If applicable, you must also install, operate, and maintain all applicable CMS (including CEMS, COMS, and CPMS) according to § 63.7525.

(b) If you demonstrate compliance through performance testing, you must establish each site-specific operating limit in Table 4 to this subpart that applies to you according to the requirements in § 63.7520, Table 7 to this subpart, and paragraph (b)(4) of this section, as applicable. You must also conduct fuel analyses according to § 63.7521 and establish maximum fuel pollutant input levels according to paragraphs (b)(1) through (3) of this section, as applicable, and as specified in § 63.7510(a)(2). (Note that § 63.7510(a)(2) exempts certain fuels from the fuel analysis requirements.) However, if you switch fuel(s) and cannot show that the new fuel(s) does (do) not increase the chlorine, mercury, or TSM input into the unit through the results of fuel analysis, then you must repeat the performance test to demonstrate compliance while burning the new fuel(s).

(1) You must establish the maximum chlorine fuel input (Clinput) during the initial fuel analysis according to the procedures in paragraphs (b)(1)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of chlorine.

(ii) During the fuel analysis for hydrogen chloride, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of chlorine, and the average chlorine concentration of each fuel type burned (Ci).

(iii) You must establish a maximum chlorine input level using Equation 7 of this section.

$$Clinput = \sum_{i=1}^{n} (Ci \times Qi) \quad \text{(Eq. 7)}$$

Where:

Clinput = Maximum amount of chlorine entering the boiler or process heater through fuels burned in units of pounds per million Btu.

Ci = Arithmetic average concentration of chlorine in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

(2) You must establish the maximum mercury fuel input level (Mercuryinput) during the initial fuel analysis using the procedures in paragraphs (b)(2)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of mercury.

(ii) During the compliance demonstration for mercury, you must determine the fraction of total heat input for each fuel burned (Qi) based on the fuel mixture that has the highest content of mercury, and the average mercury concentration of each fuel type burned (HGi).

(iii) You must establish a maximum mercury input level using Equation 8 of this section.

$$Mercuryinput = \sum_{i=1}^{n} (HGi \times Qi) \quad \text{(Eq. 8)}$$

Where:

Mercuryinput = Maximum amount of mercury entering the boiler or process heater through fuels burned in units of pounds per million Btu.

HGi = Arithmetic average concentration of mercury in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types during the performance test, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of mercury.

(3) If you opt to comply with the alternative TSM limit, you must establish the maximum TSM fuel input (TSMinput) for solid or liquid fuels during the initial fuel analysis according to the procedures in paragraphs (b)(3)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of TSM.

(ii) During the fuel analysis for TSM, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of TSM, and the average TSM concentration of each fuel type burned (TSMi).

(iii) You must establish a maximum TSM input level using Equation 9 of this section.

$$TSMinput = \sum_{i=1}^{n} (TSMi \times Qi) \qquad \text{(Eq. 9)}$$

Where:

TSMinput = Maximum amount of TSM entering the boiler or process heater through fuels burned in units of pounds per million Btu.

TSMi = Arithmetic average concentration of TSM in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of TSM. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of TSM.

(4) You must establish parameter operating limits according to paragraphs (b)(4)(i) through (ix) of this section. As indicated in Table 4 to this subpart, you are not required to establish and comply with the operating parameter limits when you are using a CEMS to monitor and demonstrate compliance with the applicable emission limit for that control device parameter.

(i) For a wet acid gas scrubber, you must establish the minimum scrubber effluent pH and liquid flow rate as defined in § 63.7575, as your operating limits during the performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for HCl and mercury emissions, you must establish one set of minimum scrubber effluent pH, liquid flow rate, and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate operating limit at the higher of the minimum values established during the performance tests.

(ii) For any particulate control device (e.g., ESP, particulate wet scrubber, fabric filter) for which you use a PM CPMS, you must establish your PM CPMS operating limit and determine compliance with it according to paragraphs (b)(4)(ii)(A) through (F) of this section.

(A) Determine your operating limit as the average PM CPMS output value recorded during the most recent performance test run demonstrating compliance with the filterable PM emission limit or at the PM CPMS output value corresponding to 75 percent of the emission limit if your PM performance test demonstrates compliance below 75 percent of the emission limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(*1*) Your PM CPMS must provide a 4-20 milliamp output and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps.

(*2*) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to at least two times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit.

(*3*) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all your PM CPMS output values for three corresponding 2-hour Method 5I test runs).

(B) If the average of your three PM performance test runs are below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or performance test with the procedures in paragraphs (b)(4)(ii)(B)(*1*) through (*4*) of this section.

(*1*) Determine your instrument zero output with one of the following procedures:

(*i*) Zero point data for *in-situ* instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench.

(*ii*) Zero point data for *extractive* instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air.

(*iii*) The zero point may also be established by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept.

(*iv*) If none of the steps in paragraphs (b)(4)(ii)(B)(*1*)(*i*) through (*iii*) of this section are possible, you must use a zero output value provided by the manufacturer.

(*2*) Determine your PM CPMS instrument average in milliamps, and the average of your corresponding three PM compliance test runs, using equation 10.

$$\bar{X} = \frac{1}{n}\sum_{i=1}^{n} X_i, \bar{Y} = \frac{1}{n}\sum_{i=1}^{n} Y_i \qquad \text{(Eq. 10)}$$

Where:

X_1 = the PM CPMS data points for the three runs constituting the performance test,

Y_1 = the PM concentration value for the three runs constituting the performance test, and

n = the number of data points.

(*3*) With your instrument zero expressed in milliamps, your three run average PM CPMS milliamp value, and your three run average PM concentration from your three compliance tests, determine a relationship of lb/MMBtu per milliamp with equation 11.

$$R = \frac{Y_1}{(X_1 - z)} \qquad \text{(Eq. 11)}$$

Where:

R = the relative lb/MMBtu per milliamp for your PM CPMS,

Y_1 = the three run average lb/MMBtu PM concentration,

X_1 = the three run average milliamp output from you PM CPMS, and

z = the milliamp equivalent of your instrument zero determined from (B)(i).

(*4*) Determine your source specific 30-day rolling average operating limit using the lb/MMBtu per milliamp value from Equation 11 in equation 12, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit.

$$O_l = z + \frac{0.75(L)}{R} \qquad \text{(Eq. 12)}$$

Where:

O_l = the operating limit for your PM CPMS on a 30-day rolling average, in milliamps.

L = your source emission limit expressed in lb/MMBtu,

z = your instrument zero in milliamps, determined from (B)(i), and

R = the relative lb/MMBtu per milliamp for your PM CPMS, from Equation 11.

(C) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your 30-day rolling average operating limit by averaging the PM CPMS milliamp output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using equation 13 and you must submit all compliance test and PM CPMS data according to the reporting requirements in paragraph (b)(4)(ii)(F) of this section.

$$O_h = \frac{1}{n}\sum_{i=1}^{n} X_i \qquad \text{(Eq. 13)}$$

Where:

X_1 = the PM CPMS data points for all runs i,

n = the number of data points, and

O_h = your site specific operating limit, in milliamps.

(D) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis, updated at the end of each new operating hour. Use Equation 14 to determine the 30-day rolling average.

$$30-\text{day} = \frac{\sum_{i=1}^{n} Hpvi}{n} \qquad \text{(Eq. 14)}$$

Where:

30-day = 30-day average.

Hpvi = is the hourly parameter value for hour i

n = is the number of valid hourly parameter values collected over the previous 720 operating hours.

(E) Use EPA Method 5 of appendix A to part 60 of this chapter to determine PM emissions. For each performance test, conduct three separate runs under the conditions that exist when the affected source is operating at the highest load or capacity level reasonably expected to occur. Conduct each test run to collect a minimum sample volume specified in Tables 1, 2, or 11 through 13 to this subpart, as applicable, for determining compliance with a new source limit or an existing source limit. Calculate the average of the results from three runs to determine compliance. You need not determine the PM collected in the impingers (“back half”) of the Method 5 particulate sampling train to demonstrate compliance with the PM standards of this subpart. This shall not preclude the permitting authority from requiring a determination of the “back half” for other purposes.

(F) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g. beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run. (iii) For a particulate wet scrubber, you must establish the minimum pressure drop and liquid flow rate as defined in § 63.7575, as your operating limits during the three-run performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for PM and TSM emissions, you must establish one set of minimum scrubber liquid flow rate and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate and pressure drop operating limits at the higher of the minimum values established during the performance tests.

(iii) For an electrostatic precipitator (ESP) operated with a wet scrubber, you must establish the minimum total secondary electric power input, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit. (These operating limits do not apply to ESP that are operated as dry controls without a wet scrubber.)

(iv) For a dry scrubber, you must establish the minimum sorbent injection rate for each sorbent, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(v) For activated carbon injection, you must establish the minimum activated carbon injection rate, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(vi) The operating limit for boilers or process heaters with fabric filters that demonstrate continuous compliance through bag leak detection systems is that a bag leak detection system be installed according to the requirements in § 63.7525, and that each fabric filter must be operated such that the bag leak detection system alert is not activated more than 5 percent of the operating time during a 6-month period.

(vii) For a minimum oxygen level, if you conduct multiple performance tests, you must set the minimum oxygen level at the lower of the minimum values established during the performance tests.

(viii) The operating limit for boilers or process heaters that demonstrate continuous compliance with the HCl emission limit using a SO_2 CEMS is to install and operate the SO_2 according to the requirements in § 63.7525(m) establish a maximum SO_2 emission rate equal to the highest hourly average SO_2 measurement during the most recent three-run performance test for HCl.

(c) If you elect to demonstrate compliance with an applicable emission limit through fuel analysis, you must conduct fuel analyses according to § 63.7521 and follow the procedures in paragraphs (c)(1) through (5) of this section.

(1) If you burn more than one fuel type, you must determine the fuel mixture you could burn in your boiler or process heater that would result in the maximum emission rates of the pollutants that you elect to demonstrate compliance through fuel analysis.

(2) You must determine the 90th percentile confidence level fuel pollutant concentration of the composite samples analyzed for each fuel type using the one-sided t-statistic test described in Equation 15 of this section.

$$P90 = mean + (SD \times t) \qquad \text{(Eq. 15)}$$

Where:

P90 = 90th percentile confidence level pollutant concentration, in pounds per million Btu.

Mean = Arithmetic average of the fuel pollutant concentration in the fuel samples analyzed according to § 63.7521, in units of pounds per million Btu.

SD = Standard deviation of the mean of pollutant concentration in the fuel samples analyzed according to § 63.7521, in units of pounds per million Btu. SD is calculated as the sample standard deviation divided by the square root of the number of samples.

t = t distribution critical value for 90th percentile ($t_{0.1}$) probability for the appropriate degrees of freedom (number of samples minus one) as obtained from a t-Distribution Critical Value Table.

(3) To demonstrate compliance with the applicable emission limit for HCl, the HCl emission rate that you calculate for your boiler or process heater using Equation 16 of this section must not exceed the applicable emission limit for HCl.

$$HCl = \sum_{i=1}^{n} (Ci90 \times Qi \times 1.028) \qquad \text{(Eq. 16)}$$

Where:

HCl = HCl emission rate from the boiler or process heater in units of pounds per million Btu.

Ci90 = 90th percentile confidence level concentration of chlorine in fuel type, i, in units of pounds per million Btu as calculated according to Equation 11 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

1.028 = Molecular weight ratio of HCl to chlorine.

(4) To demonstrate compliance with the applicable emission limit for mercury, the mercury emission rate that you calculate for your boiler or process heater using Equation 17 of this section must not exceed the applicable emission limit for mercury.

$$Mercury = \sum_{i=1}^{n} \left(Hgi90 \times Qi \right) \qquad \text{(Eq. 17)}$$

Where:

Mercury = Mercury emission rate from the boiler or process heater in units of pounds per million Btu.

Hgi90 = 90th percentile confidence level concentration of mercury in fuel, i, in units of pounds per million Btu as calculated according to Equation 11 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest mercury content.

(5) To demonstrate compliance with the applicable emission limit for TSM for solid or liquid fuels, the TSM emission rate that you calculate for your boiler or process heater from solid fuels using Equation 18 of this section must not exceed the applicable emission limit for TSM.

$$Metals = \sum_{i=1}^{n} \left(TSM90i \times Qi \right) \qquad \text{(Eq. 18)}$$

Where:

Metals = TSM emission rate from the boiler or process heater in units of pounds per million Btu.

TSMi90 = 90th percentile confidence level concentration of TSM in fuel, i, in units of pounds per million Btu as calculated according to Equation 11 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest TSM content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest TSM content.

(d) If you own or operate an existing unit with a heat input capacity of less than 10 million Btu per hour or a unit in the unit designed to burn gas 1 subcategory, you must submit a signed statement in the Notification of Compliance Status report that indicates that you conducted a tune-up of the unit.

(e) You must include with the Notification of Compliance Status a signed certification that the energy assessment was completed according to Table 3 to this subpart and is an accurate depiction of your facility at the time of the assessment.

(f) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.7545(e).

(g) If you elect to demonstrate that a gaseous fuel meets the specifications of another gas 1 fuel as defined in § 63.7575, you must conduct an initial fuel specification analyses according to § 63.7521(f) through (i) and according to the frequency listed in § 63.7540(c) and maintain records of the results of the testing as outlined in § 63.7555(g). For samples where the initial mercury specification has not been exceeded, you will include a signed certification with

the Notification of Compliance Status that the initial fuel specification test meets the gas specification outlined in the definition of other gas 1 fuels.

(h) If you own or operate a unit subject to emission limits in Tables 1 or 2 or 11 through 13 to this subpart, you must meet the work practice standard according to Table 3 of this subpart. During startup and shutdown, you must only follow the work practice standards according to item 5 of Table 3 of this subpart.

(i) If you opt to comply with the alternative SO_2 CEMS operating limit in Tables 4 and 8 to this subpart, you may do so only if your affected boiler or process heater:

(1) Has a system using wet scrubber or dry sorbent injection and SO_2 CEMS installed on the unit; and

(2) At all times, you operate the wet scrubber or dry sorbent injection for acid gas control on the unit consistent with § 63.7500(a)(3); and

(3) You establish a unit-specific maximum SO_2 operating limit by collecting the minimum hourly SO_2 emission rate on the SO_2 CEMS during the paired 3-run test for HCl. The maximum SO_2 operating limit is equal to the highest hourly average SO_2 concentration measured during the most recent HCl performance test.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7174, Jan. 31, 2013]

§ 63.7533 Can I use efficiency credits earned from implementation of energy conservation measures to comply with this subpart?

(a) If you elect to comply with the alternative equivalent output-based emission limits, instead of the heat input-based limits listed in Table 2 to this subpart, and you want to take credit for implementing energy conservation measures identified in an energy assessment, you may demonstrate compliance using efficiency credits according to the procedures in this section. You may use this compliance approach for an existing affected boiler for demonstrating initial compliance according to § 63.7522(e) and for demonstrating monthly compliance according to § 63.7522(f). Owners or operators using this compliance approach must establish an emissions benchmark, calculate and document the efficiency credits, develop an Implementation Plan, comply with the general reporting requirements, and apply the efficiency credit according to the procedures in paragraphs (b) through (f) of this section. You cannot use this compliance approach for a new or reconstructed affected boiler. Additional guidance from the Department of Energy on efficiency credits is available at: *http://www.epa.gov/ttn/atw/boiler/boilerpg.html* .

(b) For each existing affected boiler for which you intend to apply emissions credits, establish a benchmark from which emission reduction credits may be generated by determining the actual annual fuel heat input to the affected boiler before initiation of an energy conservation activity to reduce energy demand (*i.e.,* fuel usage) according to paragraphs (b)(1) through (4) of this section. The benchmark shall be expressed in trillion Btu per year heat input.

(1) The benchmark from which efficiency credits may be generated shall be determined by using the most representative, accurate, and reliable process available for the source. The benchmark shall be established for a one-year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

(2) Determine the starting point from which to measure progress. Inventory all fuel purchased and generated on-site (off-gases, residues) in physical units (MMBtu, million cubic feet, etc.).

(3) Document all uses of energy from the affected boiler. Use the most recent data available.

(4) Collect non-energy related facility and operational data to normalize, if necessary, the benchmark to current operations, such as building size, operating hours, etc. If possible, use actual data that are current and timely rather than estimated data.

(c) Efficiency credits can be generated if the energy conservation measures were implemented after January 1, 2008 and if sufficient information is available to determine the appropriate value of credits.

(1) The following emission points cannot be used to generate efficiency credits:

(i) Energy conservation measures implemented on or before January 1, 2008, unless the level of energy demand reduction is increased after January 1, 2008, in which case credit will be allowed only for change in demand reduction achieved after January 1, 2008.

(ii) Efficiency credits on shut-down boilers. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to energy conservation measures identified in the energy assessment. In this case, the bench established for the affected boiler to which the credits from the shutdown will be applied must be revised to include the benchmark established for the shutdown boiler.

(2) For all points included in calculating emissions credits, the owner or operator shall:

(i) Calculate annual credits for all energy demand points. Use Equation 19 to calculate credits. Energy conservation measures that meet the criteria of paragraph (c)(1) of this section shall not be included, except as specified in paragraph (c)(1)(i) of this section.

(3) Credits are generated by the difference between the benchmark that is established for each affected boiler, and the actual energy demand reductions from energy conservation measures implemented after January 1, 2008. Credits shall be calculated using Equation 19 of this section as follows:

(i) The overall equation for calculating credits is:

$$ECredits = \left(\sum_{i=1}^{n} EIS_{iactual} \right) \div EI_{baseline} \quad \text{(Eq. 19)}$$

Where:

ECredits = Energy Input Savings for all energy conservation measures implemented for an affected boiler, expressed as a decimal fraction of the baseline energy input.

$EIS_{iactual}$ = Energy Input Savings for each energy conservation measure, i, implemented for an affected boiler, million Btu per year.

$EI_{baseline}$ = Energy Input baseline for the affected boiler, million Btu per year.

n = Number of energy conservation measures included in the efficiency credit for the affected boiler.

(ii) [Reserved]

(d) The owner or operator shall develop, and submit for approval upon request by the Administrator, an Implementation Plan containing all of the information required in this paragraph for all boilers to be included in an efficiency credit approach. The Implementation Plan shall identify all existing affected boilers to be included in applying the efficiency credits. The Implementation Plan shall include a description of the energy conservation measures implemented and the energy savings generated from each measure and an explanation of the criteria used for determining that savings. If requested, you must submit the implementation plan for efficiency credits to the Administrator for review and approval no later than 180 days before the date on which the facility intends to demonstrate compliance using the efficiency credit approach.

(e) The emissions rate as calculated using Equation 20 of this section from each existing boiler participating in the efficiency credit option must be in compliance with the limits in Table 2 to this subpart at all times the affected unit is operating, following the compliance date specified in § 63.7495.

(f) You must use Equation 20 of this section to demonstrate initial compliance by demonstrating that the emissions from the affected boiler participating in the efficiency credit compliance approach do not exceed the emission limits in Table 2 to this subpart.

$$E_{adj} = E_m \times (1 - ECredits) \quad \text{(Eq. 20)}$$

Where:

E_{adj} = Emission level adjusted by applying the efficiency credits earned, lb per million Btu steam output (or lb per MWh) for the affected boiler.

E_m = Emissions measured during the performance test, lb per million Btu steam output (or lb per MWh) for the affected boiler.

ECredits = Efficiency credits from Equation 19 for the affected boiler.

(g) As part of each compliance report submitted as required under § 63.7550, you must include documentation that the energy conservation measures implemented continue to generate the credit for use in demonstrating compliance with the emission limits.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7178, Jan. 31, 2013]

Continuous Compliance Requirements

§ 63.7535 Is there a minimum amount of monitoring data I must obtain?

(a) You must monitor and collect data according to this section and the site-specific monitoring plan required by § 63.7505(d).

(b) You must operate the monitoring system and collect data at all required intervals at all times that each boiler or process heater is operating and compliance is required, except for periods of monitoring system malfunctions or out of control periods (see § 63.8(c)(7) of this part), and required monitoring system quality assurance or control activities, including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.

(c) You may not use data recorded during monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in data averages and calculations used to report emissions or operating levels. You must record and make available upon request results of CMS performance audits and dates and duration of periods when the CMS is out of control to completion of the corrective actions necessary to return the CMS to operation consistent with your site-specific monitoring plan. You must use all the data collected during all other periods in assessing compliance and the operation of the control device and associated control system.

(d) Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, system accuracy audits, calibration checks, and required zero and span adjustments), failure to collect required data is a deviation of the monitoring requirements. In calculating monitoring results, do not use any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities. You must calculate monitoring results using all other monitoring data collected while the process is operating. You must report all periods when the monitoring system is out of control in your annual report.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7179, Jan. 31, 2013]

§ 63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?

(a) You must demonstrate continuous compliance with each emission limit in Tables 1 and 2 or 11 through 13 to this subpart, the work practice standards in Table 3 to this subpart, and the operating limits in Table 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (19) of this section.

(1) Following the date on which the initial compliance demonstration is completed or is required to be completed under §§ 63.7 and 63.7510, whichever date comes first, operation above the established maximum or below the established minimum operating limits shall constitute a deviation of established operating limits listed in Table 4 of this subpart except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests.

(2) As specified in § 63.7550(c), you must keep records of the type and amount of all fuels burned in each boiler or process heater during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in either of the following:

(i) Lower emissions of HCl, mercury, and TSM than the applicable emission limit for each pollutant, if you demonstrate compliance through fuel analysis.

(ii) Lower fuel input of chlorine, mercury, and TSM than the maximum values calculated during the last performance test, if you demonstrate compliance through performance testing.

(3) If you demonstrate compliance with an applicable HCl emission limit through fuel analysis for a solid or liquid fuel and you plan to burn a new type of solid or liquid fuel, you must recalculate the HCl emission rate using Equation 12 of § 63.7530 according to paragraphs (a)(3)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the HCl emission rate.

(i) You must determine the chlorine concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of chlorine.

(iii) Recalculate the HCl emission rate from your boiler or process heater under these new conditions using Equation 12 of § 63.7530. The recalculated HCl emission rate must be less than the applicable emission limit.

(4) If you demonstrate compliance with an applicable HCl emission limit through performance testing and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum chlorine input using Equation 7 of § 63.7530. If the results of recalculating the maximum chlorine input using Equation 7 of § 63.7530 are greater than the maximum chlorine input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the HCl emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). In recalculating the maximum chlorine input and establishing the new operating limits, you are not required to conduct fuel analyses for and include the fuels described in § 63.7510(a)(2)(i) through (iii).

(5) If you demonstrate compliance with an applicable mercury emission limit through fuel analysis, and you plan to burn a new type of fuel, you must recalculate the mercury emission rate using Equation 13 of § 63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(i) You must determine the mercury concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of mercury.

(iii) Recalculate the mercury emission rate from your boiler or process heater under these new conditions using Equation 13 of § 63.7530. The recalculated mercury emission rate must be less than the applicable emission limit.

(6) If you demonstrate compliance with an applicable mercury emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum mercury input using Equation 8 of § 63.7530. If the results of recalculating the maximum mercury input using Equation 8 of § 63.7530 are higher than the maximum mercury input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the mercury emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(7) If your unit is controlled with a fabric filter, and you demonstrate continuous compliance using a bag leak detection system, you must initiate corrective action within 1 hour of a bag leak detection system alert and complete corrective actions as soon as practical, and operate and maintain the fabric filter system such that the periods which would cause an alert are no more than 5 percent of the operating time during a 6-month period. You must also keep records of the date, time, and duration of each alert, the time corrective action was initiated and completed, and a brief description of the cause of the alert and the corrective action taken. You must also record the percent of the operating time during each 6-month period that the conditions exist for an alert. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alert time is counted. If corrective action is required, each alert shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alert time shall be counted as the actual amount of time taken to initiate corrective action.

(8) To demonstrate compliance with the applicable alternative CO CEMS emission limit listed in Tables 1, 2, or 11 through 13 to this subpart, you must meet the requirements in paragraphs (a)(8)(i) through (iv) of this section.

(i) Continuously monitor CO according to §§ 63.7525(a) and 63.7535.

(ii) Maintain a CO emission level below or at your applicable alternative CO CEMS-based standard in Tables 1 or 2 or 11 through 13 to this subpart at all times the affected unit is operating.

(iii) Keep records of CO levels according to § 63.7555(b).

(iv) You must record and make available upon request results of CO CEMS performance audits, dates and duration of periods when the CO CEMS is out of control to completion of the corrective actions necessary to return the CO CEMS to operation consistent with your site-specific monitoring plan.

(9) The owner or operator of a boiler or process heater using a PM CPMS or a PM CEMS to meet requirements of this subpart shall install, certify, operate, and maintain the PM CPMS or PM CEMS in accordance with your site-specific monitoring plan as required in § 63.7505(d).

(10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this section. This frequency does not apply to limited-use boilers and process heaters, as defined in § 63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject;

(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

(vi) Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,

(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(B) A description of any corrective actions taken as a part of the tune-up; and

(C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

(11) If your boiler or process heater has a heat input capacity of less than 10 million Btu per hour (except as specified in paragraph (a)(12) of this section), you must conduct a biennial tune-up of the boiler or process heater as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance.

(12) If your boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in § 63.7575, you must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance. You may delay the burner inspection specified in paragraph (a)(10)(i) of this section until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

(13) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

(14) If you are using a CEMS measuring mercury emissions to meet requirements of this subpart you must install, certify, operate, and maintain the mercury CEMS as specified in paragraphs (a)(14)(i) and (ii) of this section.

(i) Operate the mercury CEMS in accordance with performance specification 12A of 40 CFR part 60, appendix B or operate a sorbent trap based integrated monitor in accordance with performance specification 12B of 40 CFR part 60, appendix B. The duration of the performance test must be the maximum of 30 unit operating days or 720 hours. For each day in which the unit operates, you must obtain hourly mercury concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a mercury CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A of 40 CFR part 60, appendix B, and quality assurance procedure 6 of 40 CFR part 60, appendix F.

(15) If you are using a CEMS to measure HCl emissions to meet requirements of this subpart, you must install, certify, operate, and maintain the HCl CEMS as specified in paragraphs (a)(15)(i) and (ii) of this section. This option for an affected unit takes effect on the date a final performance specification for an HCl CEMS is published in the FEDERAL REGISTER or the date of approval of a site-specific monitoring plan.

(i) Operate the continuous emissions monitoring system in accordance with the applicable performance specification in 40 CFR part 60, appendix B. The duration of the performance test must be the maximum of 30 unit operating days or 720 hours. For each day in which the unit operates, you must obtain hourly HCl concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a HCl CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the HCl mass emissions rate to the atmosphere according to the requirements of the applicable performance specification of 40 CFR part 60, appendix B, and the quality assurance procedures of 40 CFR part 60, appendix F.

(16) If you demonstrate compliance with an applicable TSM emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum TSM input using Equation 9 of § 63.7530. If the results of recalculating the maximum TSM input using Equation 9 of § 63.7530 are higher than the maximum total selected input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the TSM emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(17) If you demonstrate compliance with an applicable TSM emission limit through fuel analysis for solid or liquid fuels, and you plan to burn a new type of fuel, you must recalculate the TSM emission rate using Equation 14 of § 63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(i) You must determine the TSM concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of TSM.

(iii) Recalculate the TSM emission rate from your boiler or process heater under these new conditions using Equation 14 of § 63.7530. The recalculated TSM emission rate must be less than the applicable emission limit.

(18) If you demonstrate continuous PM emissions compliance with a PM CPMS you will use a PM CPMS to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. You will conduct your performance test using the test method criteria in Table 5 of this subpart. You will use the PM CPMS to demonstrate continuous compliance with this operating limit. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(i) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis, updated at the end of each new boiler or process heater operating hour.

(ii) For any deviation of the 30-day rolling PM CPMS average value from the established operating parameter limit, you must:

(A) Within 48 hours of the deviation, visually inspect the air pollution control device (APCD);

(B) If inspection of the APCD identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and

(C) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the

CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this paragraph.

(iii) PM CPMS deviations from the operating limit leading to more than four required performance tests in a 12-month operating period constitute a separate violation of this subpart.

(19) If you choose to comply with the PM filterable emissions limit by using PM CEMS you must install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS as specified in paragraphs (a)(19)(i) through (vii) of this section. The compliance limit will be expressed as a 30-day rolling average of the numerical emissions limit value applicable for your unit in Tables 1 or 2 or 11 through 13 of this subpart.

(i) Install and certify your PM CEMS according to the procedures and requirements in Performance Specification 11— Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix B to part 60 of this chapter, using test criteria outlined in Table V of this rule. The reportable measurement output from the PM CEMS must be expressed in units of the applicable emissions limit (e.g., lb/MMBtu, lb/MWh).

(ii) Operate and maintain your PM CEMS according to the procedures and requirements in Procedure 2— Quality Assurance Requirements for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix F to part 60 of this chapter.

(A) You must conduct the relative response audit (RRA) for your PM CEMS at least once annually.

(B) You must conduct the relative correlation audit (RCA) for your PM CEMS at least once every 3 years.

(iii) Collect PM CEMS hourly average output data for all boiler operating hours except as indicated in paragraph (i) of this section.

(iv) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all nonexempt boiler or process heater operating hours.

(v) You must collect data using the PM CEMS at all times the unit is operating and at the intervals specified this paragraph (a), except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities.

(vi) You must use all the data collected during all boiler or process heater operating hours in assessing the compliance with your operating limit except:

(A) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities conducted during monitoring system malfunctions in calculations and report any such periods in your annual deviation report;

(B) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out of control periods in calculations used to report emissions or operating levels and report any such periods in your annual deviation report;

(C) Any data recorded during periods of startup or shutdown.

(vii) You must record and make available upon request results of PM CEMS system performance audits, dates and duration of periods when the PM CEMS is out of control to completion of the corrective actions necessary to return the PM CEMS to operation consistent with your site-specific monitoring plan.

(b) You must report each instance in which you did not meet each emission limit and operating limit in Tables 1 through 4 or 11 through 13 to this subpart that apply to you. These instances are deviations from the emission limits or operating limits, respectively, in this subpart. These deviations must be reported according to the requirements in § 63.7550.

(c) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must follow the sampling frequency specified in paragraphs (c)(1) through (4) of this section and conduct this sampling according to the procedures in § 63.7521(f) through (i).

(1) If the initial mercury constituents in the gaseous fuels are measured to be equal to or less than half of the mercury specification as defined in § 63.7575, you do not need to conduct further sampling.

(2) If the initial mercury constituents are greater than half but equal to or less than 75 percent of the mercury specification as defined in § 63.7575, you will conduct semi-annual sampling. If 6 consecutive semi-annual fuel analyses demonstrate 50 percent or less of the mercury specification, you do not need to conduct further sampling. If any semi-annual sample exceeds 75 percent of the mercury specification, you must return to monthly sampling for that fuel, until 12 months of fuel analyses again are less than 75 percent of the compliance level.

(3) If the initial mercury constituents are greater than 75 percent of the mercury specification as defined in § 63.7575, you will conduct monthly sampling. If 12 consecutive monthly fuel analyses demonstrate 75 percent or less of the mercury specification, you may decrease the fuel analysis frequency to semi-annual for that fuel.

(4) If the initial sample exceeds the mercury specification as defined in § 63.7575, each affected boiler or process heater combusting this fuel is not part of the unit designed to burn gas 1 subcategory and must be in compliance with the emission and operating limits for the appropriate subcategory. You may elect to conduct additional monthly sampling while complying with these emissions and operating limits to demonstrate that the fuel qualifies as another gas 1 fuel. If 12 consecutive monthly fuel analyses samples are at or below the mercury specification as defined in § 63.7575, each affected boiler or process heater combusting the fuel can elect to switch back into the unit designed to burn gas 1 subcategory until the mercury specification is exceeded.

(d) For startup and shutdown, you must meet the work practice standards according to item 5 of Table 3 of this subpart.

[78 FR 7179, Jan. 31, 2013]

§ 63.7541 How do I demonstrate continuous compliance under the emissions averaging provision?

(a) Following the compliance date, the owner or operator must demonstrate compliance with this subpart on a continuous basis by meeting the requirements of paragraphs (a)(1) through (5) of this section.

(1) For each calendar month, demonstrate compliance with the average weighted emissions limit for the existing units participating in the emissions averaging option as determined in § 63.7522(f) and (g).

(2) You must maintain the applicable opacity limit according to paragraphs (a)(2)(i) and (ii) of this section.

(i) For each existing unit participating in the emissions averaging option that is equipped with a dry control system and not vented to a common stack, maintain opacity at or below the applicable limit.

(ii) For each group of units participating in the emissions averaging option where each unit in the group is equipped with a dry control system and vented to a common stack that does not receive emissions from non-affected units, maintain opacity at or below the applicable limit at the common stack.

(3) For each existing unit participating in the emissions averaging option that is equipped with a wet scrubber, maintain the 30-day rolling average parameter values at or above the operating limits established during the most recent performance test.

(4) For each existing unit participating in the emissions averaging option that has an approved alternative operating parameter, maintain the 30-day rolling average parameter values consistent with the approved monitoring plan.

(5) For each existing unit participating in the emissions averaging option venting to a common stack configuration containing affected units from other subcategories, maintain the appropriate operating limit for each unit as specified in Table 4 to this subpart that applies.

(b) Any instance where the owner or operator fails to comply with the continuous monitoring requirements in paragraphs (a)(1) through (5) of this section is a deviation.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7182, Jan. 31, 2013]

Notification, Reports, and Records

§ 63.7545 What notifications must I submit and when?

(a) You must submit to the Administrator all of the notifications in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.

(b) As specified in § 63.9(b)(2), if you startup your affected source before January 31, 2013, you must submit an Initial Notification not later than 120 days after January 31, 2013.

(c) As specified in § 63.9(b)(4) and (5), if you startup your new or reconstructed affected source on or after January 31, 2013, you must submit an Initial Notification not later than 15 days after the actual date of startup of the affected source.

(d) If you are required to conduct a performance test you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin.

(e) If you are required to conduct an initial compliance demonstration as specified in § 63.7530, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to § 63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8), as applicable. If you are not required to conduct an initial compliance demonstration as specified in § 63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8).

(1) A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with this subpart, description of the fuel(s) burned, including whether the fuel(s) were a secondary material determined by you or the EPA through a petition process to be a non-waste under § 241.3 of this chapter, whether the fuel(s) were a secondary material processed from discarded non-hazardous secondary materials within the meaning of § 241.3 of this chapter, and justification for the selection of fuel(s) burned during the compliance demonstration.

(2) Summary of the results of all performance tests and fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limits, and including:

(i) Identification of whether you are complying with the PM emission limit or the alternative TSM emission limit.

(ii) Identification of whether you are complying with the output-based emission limits or the heat input-based (i.e., lb/MMBtu or ppm) emission limits,

(3) A summary of the maximum CO emission levels recorded during the performance test to show that you have met any applicable emission standard in Tables 1, 2, or 11 through 13 to this subpart, if you are not using a CO CEMS to demonstrate compliance.

(4) Identification of whether you plan to demonstrate compliance with each applicable emission limit through performance testing, a CEMS, or fuel analysis.

(5) Identification of whether you plan to demonstrate compliance by emissions averaging and identification of whether you plan to demonstrate compliance by using efficiency credits through energy conservation:

(i) If you plan to demonstrate compliance by emission averaging, report the emission level that was being achieved or the control technology employed on January 31, 2013.

(ii) [Reserved]

(6) A signed certification that you have met all applicable emission limits and work practice standards.

(7) If you had a deviation from any emission limit, work practice standard, or operating limit, you must also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report.

(8) In addition to the information required in § 63.9(h)(2), your notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) “This facility complies with the required initial tune-up according to the procedures in § 63.7540(a)(10)(i) through (vi).”

(ii) “This facility has had an energy assessment performed according to § 63.7530(e).”

(iii) Except for units that burn only natural gas, refinery gas, or other gas 1 fuel, or units that qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act, include the following: “No secondary materials that are solid waste were combusted in any affected unit.”

(f) If you operate a unit designed to burn natural gas, refinery gas, or other gas 1 fuels that is subject to this subpart, and you intend to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of this part, part 60, 61, or 65, or other gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in § 63.7575, you must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in § 63.7575. The notification must include the information specified in paragraphs (f)(1) through (5) of this section.

(1) Company name and address.

(2) Identification of the affected unit.

(3) Reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared or the natural gas supply interruption began.

(4) Type of alternative fuel that you intend to use.

(5) Dates when the alternative fuel use is expected to begin and end.

(g) If you intend to commence or recommence combustion of solid waste, you must provide 30 days prior notice of the date upon which you will commence or recommence combustion of solid waste. The notification must identify:

(1) The name of the owner or operator of the affected source, as defined in § 63.7490, the location of the source, the boiler(s) or process heater(s) that will commence burning solid waste, and the date of the notice.

(2) The currently applicable subcategories under this subpart.

(3) The date on which you became subject to the currently applicable emission limits.

(4) The date upon which you will commence combusting solid waste.

(h) If you have switched fuels or made a physical change to the boiler and the fuel switch or physical change resulted in the applicability of a different subcategory, you must provide notice of the date upon which you switched fuels or made the physical change within 30 days of the switch/change. The notification must identify:

(1) The name of the owner or operator of the affected source, as defined in § 63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice.

(2) The currently applicable subcategory under this subpart.

(3) The date upon which the fuel switch or physical change occurred.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7183, Jan. 31, 2013]

§ 63.7550 What reports must I submit and when?

(a) You must submit each report in Table 9 to this subpart that applies to you.

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section. For units that are subject only to a requirement to conduct an annual, biennial, or 5-year tune-up according to § 63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in § 63.7495 and ending on July 31 or January 31, whichever date is the first date that occurs at least 180 days (or 1, 2, or 5 years, as applicable, if submitting an annual, biennial, or 5-year compliance report) after the compliance date that is specified for your source in § 63.7495.

(2) The first compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in § 63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.

(4) Each subsequent compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.

(c) A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule.

(1) If the facility is subject to a the requirements of a tune up they must submit a compliance report with the information in paragraphs (c)(5)(i) through (iv) and (xiv) of this section.

(2) If a facility is complying with the fuel analysis they must submit a compliance report with the information in paragraphs (c)(5)(i) through (iv), (vi), (x), (xi), (xiii), (xv) and paragraph (d) of this section.

(3) If a facility is complying with the applicable emissions limit with performance testing they must submit a compliance report with the information in (c)(5)(i) through (iv), (vi), (vii), (ix), (xi), (xiii), (xv) and paragraph (d) of this section.

(4) If a facility is complying with an emissions limit using a CMS the compliance report must contain the information required in paragraphs (c)(5)(i) through (vi), (xi), (xiii), (xv) through (xvii), and paragraph (e) of this section.

(5)(i) Company and Facility name and address.

(ii) Process unit information, emissions limitations, and operating parameter limitations.

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

(iv) The total operating time during the reporting period.

(v) If you use a CMS, including CEMS, COMS, or CPMS, you must include the monitoring equipment manufacturer(s) and model numbers and the date of the last CMS certification or audit.

(vi) The total fuel use by each individual boiler or process heater subject to an emission limit within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by the EPA or your basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure.

(vii) If you are conducting performance tests once every 3 years consistent with § 63.7515(b) or (c), the date of the last 2 performance tests and a statement as to whether there have been any operational changes since the last performance test that could increase emissions.

(viii) A statement indicating that you burned no new types of fuel in an individual boiler or process heater subject to an emission limit. Or, if you did burn a new type of fuel and are subject to a HCl emission limit, you must submit the calculation of chlorine input, using Equation 7 of § 63.7530, that demonstrates that your source is still within its maximum chlorine input level established during the previous performance testing (for sources that demonstrate compliance through performance testing) or you must submit the calculation of HCl emission rate using Equation 12 of § 63.7530 that demonstrates that your source is still meeting the emission limit for HCl emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a mercury emission limit, you must submit the calculation of mercury input, using Equation 8 of § 63.7530, that demonstrates that your source is still within its maximum mercury input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of mercury emission rate using Equation 13 of § 63.7530 that demonstrates that your source is still meeting the emission limit for mercury emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a TSM emission limit, you must submit the calculation of TSM input, using Equation 9 of § 63.7530, that demonstrates that your source is still within its maximum TSM input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of TSM emission rate, using Equation 14 of § 63.7530, that demonstrates that your source is still meeting the emission limit for TSM emissions (for boilers or process heaters that demonstrate compliance through fuel analysis).

(ix) If you wish to burn a new type of fuel in an individual boiler or process heater subject to an emission limit and you cannot demonstrate compliance with the maximum chlorine input operating limit using Equation 7 of § 63.7530 or the maximum mercury input operating limit using Equation 8 of § 63.7530, or the maximum TSM input operating limit using Equation 9 of § 63.7530 you must include in the compliance report a statement indicating the intent to conduct a new performance test within 60 days of starting to burn the new fuel.

(x) A summary of any monthly fuel analyses conducted to demonstrate compliance according to §§ 63.7521 and 63.7530 for individual boilers or process heaters subject to emission limits, and any fuel specification analyses conducted according to §§ 63.7521(f) and 63.7530(g).

(xi) If there are no deviations from any emission limits or operating limits in this subpart that apply to you, a statement that there were no deviations from the emission limits or operating limits during the reporting period.

(xii) If there were no deviations from the monitoring requirements including no periods during which the CMSs, including CEMS, COMS, and CPMS, were out of control as specified in § 63.8(c)(7), a statement that there were no deviations and no periods during which the CMS were out of control during the reporting period.

(xiii) If a malfunction occurred during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by you during a malfunction of a boiler, process heater, or associated air pollution control device or CMS to minimize emissions in accordance with § 63.7500(a)(3), including actions taken to correct the malfunction.

(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to § 63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.

(xv) If you plan to demonstrate compliance by emission averaging, certify the emission level achieved or the control technology employed is no less stringent than the level or control technology contained in the notification of compliance status in § 63.7545(e)(5)(i).

(xvi) For each reporting period, the compliance reports must include all of the calculated 30 day rolling average values based on the daily CEMS (CO and mercury) and CPMS (PM CPMS output, scrubber pH, scrubber liquid flow rate, scrubber pressure drop) data.

(xvii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(d) For each deviation from an emission limit or operating limit in this subpart that occurs at an individual boiler or process heater where you are not using a CMS to comply with that emission limit or operating limit, the compliance report must additionally contain the information required in paragraphs (d)(1) through (3) of this section.

(1) A description of the deviation and which emission limit or operating limit from which you deviated.

(2) Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.

(3) If the deviation occurred during an annual performance test, provide the date the annual performance test was completed.

(e) For each deviation from an emission limit, operating limit, and monitoring requirement in this subpart occurring at an individual boiler or process heater where you are using a CMS to comply with that emission limit or operating limit, the compliance report must additionally contain the information required in paragraphs (e)(1) through (9) of this section. This includes any deviations from your site-specific monitoring plan as required in § 63.7505(d).

(1) The date and time that each deviation started and stopped and description of the nature of the deviation (i.e., what you deviated from).

(2) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out of control, including the information in § 63.8(c)(8).

(4) The date and time that each deviation started and stopped.

(5) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(6) A characterization of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS's downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.

(8) A brief description of the source for which there was a deviation.

(9) A description of any changes in CMSs, processes, or controls since the last reporting period for the source for which there was a deviation.

(f)-(g) [Reserved]

(h) You must submit the reports according to the procedures specified in paragraphs (h)(1) through (3) of this section.

(1) Within 60 days after the date of completing each performance test (defined in § 63.2) as required by this subpart you must submit the results of the performance tests, including any associated fuel analyses, required by this subpart and the compliance reports required in § 63.7550(b) to the EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through the EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). Performance test data must be submitted in the file format generated through use of the EPA's Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/index.html*). Only data collected using test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to the EPA via CDX as described earlier in this paragraph. At the discretion of the Administrator, you must also submit these reports, including the confidential business information, to the Administrator in the format specified by the Administrator. For any performance test conducted using test methods that are not listed on the ERT Web site, the owner or operator shall submit the results of the performance test in paper submissions to the Administrator.

(2) Within 60 days after the date of completing each CEMS performance evaluation test (defined in 63.2) you must submit the relative accuracy test audit (RATA) data to the EPA's Central Data Exchange by using CEDRI as mentioned in paragraph (h)(1) of this section. Only RATA pollutants that can be documented with the ERT (as listed on the ERT Web site) are subject to this requirement. For any performance evaluations with no corresponding RATA pollutants listed on the ERT Web site, the owner or operator shall submit the results of the performance evaluation in paper submissions to the Administrator.

(3) You must submit all reports required by Table 9 of this subpart electronically using CEDRI that is accessed through the EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due the report you must submit the report to the Administrator at the appropriate address listed in § 63.13. At the discretion of the Administrator, you must also submit these reports, to the Administrator in the format specified by the Administrator.

[78 FR 7183, Jan. 31, 2013]

§ 63.7555 What records must I keep?

(a) You must keep records according to paragraphs (a)(1) and (2) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in § 63.10(b)(2)(xiv).

(2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in § 63.10(b)(2)(viii).

(b) For each CEMS, COMS, and continuous monitoring system you must keep records according to paragraphs (b)(1) through (5) of this section.

(1) Records described in § 63.10(b)(2)(vii) through (xi).

(2) Monitoring data for continuous opacity monitoring system during a performance evaluation as required in § 63.6(h)(7)(i) and (ii).

(3) Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in § 63.8(d)(3).

(4) Request for alternatives to relative accuracy test for CEMS as required in § 63.8(f)(6)(i).

(5) Records of the date and time that each deviation started and stopped.

(c) You must keep the records required in Table 8 to this subpart including records of all monitoring data and calculated averages for applicable operating limits, such as opacity, pressure drop, pH, and operating load, to show continuous compliance with each emission limit and operating limit that applies to you.

(d) For each boiler or process heater subject to an emission limit in Tables 1, 2, or 11 through 13 to this subpart, you must also keep the applicable records in paragraphs (d)(1) through (11) of this section.

(1) You must keep records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used.

(2) If you combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to § 241.3(b)(1) and (2) of this chapter, you must keep a record that documents how the secondary material meets each of the legitimacy criteria under § 241.3(d)(1) of this chapter. If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to § 241.3(b)(4) of this chapter, you must keep records as to how the operations that produced the fuel satisfy the definition of processing in § 241.2 of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under § 241.3(c) of this chapter, you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per § 241.4 of this chapter, you must keep records documenting that the material is listed as a non-waste under § 241.4(a) of this chapter. Units exempt from the incinerator standards under section 129(g)(1) of the Clean Air Act because they are qualifying facilities burning a homogeneous waste stream do not need to maintain the records described in this paragraph (d)(2).

(3) For units in the limited use subcategory, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.

(4) A copy of all calculations and supporting documentation of maximum chlorine fuel input, using Equation 7 of § 63.7530, that were done to demonstrate continuous compliance with the HCl emission limit, for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of HCl emission rates, using Equation 12 of § 63.7530, that were done to demonstrate compliance with the HCl emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum chlorine fuel input or HCl emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate chlorine fuel input, or HCl emission rate, for each boiler and process heater.

(5) A copy of all calculations and supporting documentation of maximum mercury fuel input, using Equation 8 of § 63.7530, that were done to demonstrate continuous compliance with the mercury emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of mercury emission rates, using Equation 13 of § 63.7530, that were done to demonstrate compliance with the mercury emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum mercury fuel input or mercury emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate mercury fuel input, or mercury emission rates, for each boiler and process heater.

(6) If, consistent with § 63.7515(b), you choose to stack test less frequently than annually, you must keep a record that documents that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit (or, in specific instances noted in Tables 1 and 2 or 11 through 13 to this subpart, less than the applicable

emission limit), and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.

(7) Records of the occurrence and duration of each malfunction of the boiler or process heater, or of the associated air pollution control and monitoring equipment.

(8) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in § 63.7500(a)(3), including corrective actions to restore the malfunctioning boiler or process heater, air pollution control, or monitoring equipment to its normal or usual manner of operation.

(9) A copy of all calculations and supporting documentation of maximum TSM fuel input, using Equation 9 of § 63.7530, that were done to demonstrate continuous compliance with the TSM emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of TSM emission rates, using Equation 14 of § 63.7530, that were done to demonstrate compliance with the TSM emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum TSM fuel input or TSM emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate TSM fuel input, or TSM emission rates, for each boiler and process heater.

(10) You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.

(11) You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.

(e) If you elect to average emissions consistent with § 63.7522, you must additionally keep a copy of the emission averaging implementation plan required in § 63.7522(g), all calculations required under § 63.7522, including monthly records of heat input or steam generation, as applicable, and monitoring records consistent with § 63.7541.

(f) If you elect to use efficiency credits from energy conservation measures to demonstrate compliance according to § 63.7533, you must keep a copy of the Implementation Plan required in § 63.7533(d) and copies of all data and calculations used to establish credits according to § 63.7533(b), (c), and (f).

(g) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must maintain monthly records (or at the frequency required by § 63.7540(c)) of the calculations and results of the fuel specification for mercury in Table 6.

(h) If you operate a unit in the unit designed to burn gas 1 subcategory that is subject to this subpart, and you use an alternative fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart under this part, other gas 1 fuel, or gaseous fuel subject to another subpart of this part or part 60, 61, or 65, you must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies.

(i) You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.

(j) You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7185, Jan. 31, 2013]

§ 63.7560 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review, according to § 63.10(b)(1).

(b) As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1). You can keep the records off site for the remaining 3 years.

Other Requirements and Information

§ 63.7565 What parts of the General Provisions apply to me?

Table 10 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

§ 63.7570 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the EPA, or an Administrator such as your state, local, or tribal agency. If the EPA Administrator has delegated authority to your state, local, or tribal agency, then that agency (as well as the EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your state, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a state, local, or tribal agency under 40 CFR part 63, subpart E, the authorities listed in paragraphs (b)(1) through (5) of this section are retained by the EPA Administrator and are not transferred to the state, local, or tribal agency, however, the EPA retains oversight of this subpart and can take enforcement actions, as appropriate.

(1) Approval of alternatives to the non-opacity emission limits and work practice standards in § 63.7500(a) and (b) under § 63.6(g).

(2) Approval of alternative opacity emission limits in § 63.7500(a) under § 63.6(h)(9).

(3) Approval of major change to test methods in Table 5 to this subpart under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90, and alternative analytical methods requested under § 63.7521(b)(2).

(4) Approval of major change to monitoring under § 63.8(f) and as defined in § 63.90, and approval of alternative operating parameters under § 63.7500(a)(2) and § 63.7522(g)(2).

(5) Approval of major change to recordkeeping and reporting under § 63.10(e) and as defined in § 63.90.

[76 FR 15664, Mar. 21, 2011 as amended at 78 FR 7186, Jan. 31, 2013]

§ 63.7575 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in § 63.2 (the General Provisions), and in this section as follows:

10-day rolling average means the arithmetic mean of the previous 240 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating. The 240 hours should be consecutive, but not necessarily continuous if operations were intermittent.

30-day rolling average means the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating. The 720 hours should be consecutive, but not necessarily continuous if operations were intermittent.

Affirmative defense means, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

Annual capacity factor means the ratio between the actual heat input to a boiler or process heater from the fuels burned during a calendar year and the potential heat input to the boiler or process heater had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity.

Annual heat input means the heat input for the 12 months preceding the compliance demonstration.

Average annual heat input rate means total heat input divided by the hours of operation for the 12 months preceding the compliance demonstration.

Bag leak detection system means a group of instruments that are capable of monitoring particulate matter loadings in the exhaust of a fabric filter (*i.e.,* baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on electrodynamic, triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

Benchmark means the fuel heat input for a boiler or process heater for the one-year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

Biodiesel means a mono-alkyl ester derived from biomass and conforming to ASTM D6751-11b, Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels (incorporated by reference, see § 63.14).

Biomass or bio-based solid fuel means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue; wood products (*e.g.,* trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings); animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff (*e.g.,* almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds. This definition of biomass is not intended to suggest that these materials are or are not solid waste.

Blast furnace gas fuel-fired boiler or process heater means an industrial/commercial/institutional boiler or process heater that receives 90 percent or more of its total annual gas volume from blast furnace gas.

Boiler means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water. Controlled flame combustion refers to a steady-state, or near steady-state, process wherein fuel and/or oxidizer feed rates are controlled. A device combusting solid waste, as defined in § 241.3 of this chapter, is not a boiler unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Waste heat boilers are excluded from this definition.

Boiler system means the boiler and associated components, such as, the feed water system, the combustion air system, the fuel system (including burners), blowdown system, combustion control systems, steam systems, and condensate return systems.

Calendar year means the period between January 1 and December 31, inclusive, for a given year.

Coal means all solid fuels classifiable as anthracite, bituminous, sub-bituminous, or lignite by ASTM D388 (incorporated by reference, see § 63.14), coal refuse, and petroleum coke. For the purposes of this subpart, this definition of “coal” includes synthetic fuels derived from coal, including but not limited to, solvent-refined coal, coal-oil mixtures, and coal-water mixtures. Coal derived gases are excluded from this definition.

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

Commercial/institutional boiler means a boiler used in commercial establishments or institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, elementary and secondary schools, libraries, religious establishments, governmental buildings, hotels, restaurants, and laundries to provide electricity, steam, and/or hot water.

Common stack means the exhaust of emissions from two or more affected units through a single flue. Affected units with a common stack may each have separate air pollution control systems located before the common stack, or may have a single air pollution control system located after the exhausts come together in a single flue.

Cost-effective energy conservation measure means a measure that is implemented to improve the energy efficiency of the boiler or facility that has a payback (return of investment) period of 2 years or less.

Daily block average means the arithmetic mean of all valid emission concentrations or parameter levels recorded when a unit is operating measured over the 24-hour period from 12 a.m. (midnight) to 12 a.m. (midnight), except for periods of startup and shutdown or downtime.

Deviation. (1) *Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(i) Fails to meet any applicable requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard; or

(ii) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit.

(2) A deviation is not always a violation.

Dioxins/furans means tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see § 63.14) or diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see § 63.14), kerosene, and biodiesel as defined by the American Society of Testing and Materials in ASTM D6751-11b (incorporated by reference, see § 60.14).

Dry scrubber means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems used as control devices in fluidized bed boilers and process heaters are included in this definition. A dry scrubber is a dry control system.

Dutch oven means a unit having a refractory-walled cell connected to a conventional boiler setting. Fuel materials are introduced through an opening in the roof of the dutch oven and burn in a pile on its floor. Fluidized bed boilers are not part of the dutch oven design category.

Efficiency credit means emission reductions above those required by this subpart. Efficiency credits generated may be used to comply with the emissions limits. Credits may come from pollution prevention projects that result in reduced fuel use by affected units. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to implementation of the energy conservation measures identified in the energy assessment.

Electric utility steam generating unit (EGU) means a fossil fuel-fired combustion unit of more than 25 megawatts electric (MWe) that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 MWe output to any utility power distribution system for sale is considered an electric utility steam generating unit. To be “capable of combusting” fossil fuels, an EGU would need to have these fuels allowed in their operating permits and have the appropriate fuel handling facilities on-site or otherwise available (e.g., coal handling equipment, including coal storage area, belts and conveyers, pulverizers, etc.; oil storage facilities). In addition, fossil fuel-fired EGU means any EGU

that fired fossil fuel for more than 10.0 percent of the average annual heat input in any 3 consecutive calendar years or for more than 15.0 percent of the annual heat input during any one calendar year after April 16, 2012.

Electrostatic precipitator (ESP) means an add-on air pollution control device used to capture particulate matter by charging the particles using an electrostatic field, collecting the particles using a grounded collecting surface, and transporting the particles into a hopper. An electrostatic precipitator is usually a dry control system.

Energy assessment means the following for the emission units covered by this subpart:

(1) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of less than 0.3 trillion Btu (TBtu) per year will be 8 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s) and any on-site energy use system(s) accounting for at least 50 percent of the affected boiler(s) energy (e.g., steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing an 8-hour on-site energy assessment.

(2) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of 0.3 to 1.0 TBtu/year will be 24 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s) and any on-site energy use system(s) accounting for at least 33 percent of the energy (e.g., steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing a 24-hour on-site energy assessment.

(3) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity greater than 1.0 TBtu/year will be up to 24 on-site technical labor hours in length for the first TBtu/yr plus 8 on-site technical labor hours for every additional 1.0 TBtu/yr not to exceed 160 on-site technical hours, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 20 percent of the energy (e.g., steam, process heat, hot water, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities.

(4) The on-site energy use systems serving as the basis for the percent of affected boiler(s) and process heater(s) energy production in paragraphs (1), (2), and (3) of this definition may be segmented by production area or energy use area as most logical and applicable to the specific facility being assessed (e.g., product X manufacturing area; product Y drying area; Building Z).

Energy management practices means the set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility.

Energy management program means a program that includes a set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility. Facilities may establish their program through energy management systems compatible with ISO 50001.

Energy use system includes the following systems located on-site that use energy (steam, hot water, or electricity) provided by the affected boiler or process heater: process heating; compressed air systems; machine drive (motors, pumps, fans); process cooling; facility heating, ventilation, and air-conditioning systems; hot water systems; building envelop; and lighting; or other systems that use steam, hot water, process heat, or electricity provided by the affected boiler or process heater. Energy use systems are only those systems using energy clearly produced by affected boilers and process heaters.

Equivalent means the following only as this term is used in Table 6 to this subpart:

(1) An equivalent sample collection procedure means a published voluntary consensus standard or practice (VCS) or EPA method that includes collection of a minimum of three composite fuel samples, with each composite consisting of a minimum of three increments collected at approximately equal intervals over the test period.

(2) An equivalent sample compositing procedure means a published VCS or EPA method to systematically mix and obtain a representative subsample (part) of the composite sample.

(3) An equivalent sample preparation procedure means a published VCS or EPA method that: Clearly states that the standard, practice or method is appropriate for the pollutant and the fuel matrix; or is cited as an appropriate sample preparation standard, practice or method for the pollutant in the chosen VCS or EPA determinative or analytical method.

(4) An equivalent procedure for determining heat content means a published VCS or EPA method to obtain gross calorific (or higher heating) value.

(5) An equivalent procedure for determining fuel moisture content means a published VCS or EPA method to obtain moisture content. If the sample analysis plan calls for determining metals (especially the mercury, selenium, or arsenic) using an aliquot of the dried sample, then the drying temperature must be modified to prevent vaporizing these metals. On the other hand, if metals analysis is done on an “as received” basis, a separate aliquot can be dried to determine moisture content and the metals concentration mathematically adjusted to a dry basis.

(6) An equivalent pollutant (mercury, HCl) determinative or analytical procedure means a published VCS or EPA method that clearly states that the standard, practice, or method is appropriate for the pollutant and the fuel matrix and has a published detection limit equal or lower than the methods listed in Table 6 to this subpart for the same purpose.

Fabric filter means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse. A fabric filter is a dry control system.

Federally enforceable means all limitations and conditions that are enforceable by the EPA Administrator, including, but not limited to, the requirements of 40 CFR parts 60, 61, 63, and 65, requirements within any applicable state implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Fluidized bed boiler means a boiler utilizing a fluidized bed combustion process that is not a pulverized coal boiler.

Fluidized bed boiler with an integrated fluidized bed heat exchanger means a boiler utilizing a fluidized bed combustion where the entire tube surface area is located outside of the furnace section at the exit of the cyclone section and exposed to the flue gas stream for conductive heat transfer. This design applies only to boilers in the unit designed to burn coal/solid fossil fuel subcategory that fire coal refuse.

Fluidized bed combustion means a process where a fuel is burned in a bed of granulated particles, which are maintained in a mobile suspension by the forward flow of air and combustion products.

Fuel cell means a boiler type in which the fuel is dropped onto suspended fixed grates and is fired in a pile. The refractory-lined fuel cell uses combustion air preheating and positioning of secondary and tertiary air injection ports to improve boiler efficiency. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, and suspension burners are not part of the fuel cell subcategory.

Fuel type means each category of fuels that share a common name or classification. Examples include, but are not limited to, bituminous coal, sub-bituminous coal, lignite, anthracite, biomass, distillate oil, residual oil. Individual fuel types received from different suppliers are not considered new fuel types.

Gaseous fuel includes, but is not limited to, natural gas, process gas, landfill gas, coal derived gas, refinery gas, and biogas. Blast furnace gas and process gases that are regulated under another subpart of this part, or part 60, part 61, or part 65 of this chapter, are exempted from this definition.

Heat input means heat derived from combustion of fuel in a boiler or process heater and does not include the heat input from preheated combustion air, recirculated flue gases, returned condensate, or exhaust gases from other sources such as gas turbines, internal combustion engines, kilns, etc.

Heavy liquid includes residual oil and any other liquid fuel not classified as a light liquid.

Hourly average means the arithmetic average of at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

Hot water heater means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous, liquid, or biomass/bio-based solid fuel and is withdrawn for use external to the vessel. Hot water boilers (i.e., not generating steam) combusting gaseous, liquid, or biomass fuel with a heat input capacity of less than 1.6 million Btu per hour are included in this definition. The 120 U.S. gallon capacity threshold to be considered a hot water heater is independent of the 1.6 MMBtu/hr heat input capacity threshold for hot water boilers. Hot water heater also means a tankless unit that provides on demand hot water.

Hybrid suspension grate boiler means a boiler designed with air distributors to spread the fuel material over the entire width and depth of the boiler combustion zone. The biomass fuel combusted in these units exceeds a moisture content of 40 percent on an as-fired annual heat input basis. The drying and much of the combustion of the fuel takes place in suspension, and the combustion is completed on the grate or floor of the boiler. Fluidized bed, dutch oven, and pile burner designs are not part of the hybrid suspension grate boiler design category.

Industrial boiler means a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity.

Light liquid includes distillate oil, biodiesel, or vegetable oil.

Limited-use boiler or process heater means any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable average annual capacity factor of no more than 10 percent.

Liquid fuel includes, but is not limited to, light liquid, heavy liquid, any form of liquid fuel derived from petroleum, used oil, liquid biofuels, biodiesel, vegetable oil, and comparable fuels as defined under 40 CFR 261.38.

Load fraction means the actual heat input of a boiler or process heater divided by heat input during the performance test that established the minimum sorbent injection rate or minimum activated carbon injection rate, expressed as a fraction (e.g., for 50 percent load the load fraction is 0.5).

Major source for oil and natural gas production facilities, as used in this subpart, shall have the same meaning as in § 63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment, as defined in this section), and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) Emissions from processes, operations, or equipment that are not part of the same facility, as defined in this section, shall not be aggregated; and

(3) For facilities that are production field facilities, only HAP emissions from glycol dehydration units and storage vessels with the potential for flash emissions shall be aggregated for a major source determination. For facilities that are not production field facilities, HAP emissions from all HAP emission units shall be aggregated for a major source determination.

Metal process furnaces are a subcategory of process heaters, as defined in this subpart, which include natural gas-fired annealing furnaces, preheat furnaces, reheat furnaces, aging furnaces, heat treat furnaces, and homogenizing furnaces.

Million Btu (MMBtu) means one million British thermal units.

Minimum activated carbon injection rate means load fraction multiplied by the lowest hourly average activated carbon injection rate measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum oxygen level means the lowest hourly average oxygen level measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum pressure drop means the lowest hourly average pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum scrubber effluent pH means the lowest hourly average sorbent liquid pH measured at the inlet to the wet scrubber according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable hydrogen chloride emission limit.

Minimum scrubber liquid flow rate means the lowest hourly average liquid flow rate (e.g., to the PM scrubber or to the acid gas scrubber) measured according to Table 7 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limit.

Minimum scrubber pressure drop means the lowest hourly average scrubber pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum sorbent injection rate means:

(1) The load fraction multiplied by the lowest hourly average sorbent injection rate for each sorbent measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits; or

(2) For fluidized bed combustion, the lowest average ratio of sorbent to sulfur measured during the most recent performance test.

Minimum total secondary electric power means the lowest hourly average total secondary electric power determined from the values of secondary voltage and secondary current to the electrostatic precipitator measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits.

Natural gas means:

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

(2) Liquefied petroleum gas, as defined in ASTM D1835 (incorporated by reference, see § 63.14); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 35 and 41 megajoules (MJ) per dry standard cubic meter (950 and 1,100 Btu per dry standard cubic foot); or

(4) Propane or propane derived synthetic natural gas. Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure $C_3 H_8$.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Operating day means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the boiler or process heater unit. It is not necessary for fuel to be combusted for the entire 24-hour period.

Other combustor means a unit designed to burn solid fuel that is not classified as a dutch oven, fluidized bed, fuel cell, hybrid suspension grate boiler, pulverized coal boiler, stoker, sloped grate, or suspension boiler as defined in this subpart.

Other gas 1 fuel means a gaseous fuel that is not natural gas or refinery gas and does not exceed a maximum concentration of 40 micrograms/cubic meters of mercury.

Oxygen analyzer system means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler or process heater flue gas, boiler or process heater, firebox, or other appropriate location. This definition includes oxygen trim systems. The source owner or operator must install, calibrate, maintain, and operate the oxygen analyzer system in accordance with the manufacturer's recommendations.

Oxygen trim system means a system of monitors that is used to maintain excess air at the desired level in a combustion device. A typical system consists of a flue gas oxygen and/or CO monitor that automatically provides a feedback signal to the combustion air controller.

Particulate matter (PM) means any finely divided solid or liquid material, other than uncombined water, as measured by the test methods specified under this subpart, or an approved alternative method.

Period of gas curtailment or supply interruption means a period of time during which the supply of gaseous fuel to an affected boiler or process heater is restricted or halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.

Pile burner means a boiler design incorporating a design where the anticipated biomass fuel has a high relative moisture content. Grates serve to support the fuel, and underfire air flowing up through the grates provides oxygen for combustion, cools the grates, promotes turbulence in the fuel bed, and fires the fuel. The most common form of pile burning is the dutch oven.

Process heater means an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials. A device combusting solid waste, as defined in § 241.3 of this chapter, is not a process heater unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Process heaters do not include units used for comfort heat or space heat, food preparation for on-site consumption, or autoclaves. Waste heat process heaters are excluded from this definition.

Pulverized coal boiler means a boiler in which pulverized coal or other solid fossil fuel is introduced into an air stream that carries the coal to the combustion chamber of the boiler where it is fired in suspension.

Qualified energy assessor means:

(1) Someone who has demonstrated capabilities to evaluate energy savings opportunities for steam generation and major energy using systems, including, but not limited to:

(i) Boiler combustion management.

(ii) Boiler thermal energy recovery, including

(A) Conventional feed water economizer,

(B) Conventional combustion air preheater, and

(C) Condensing economizer.

(iii) Boiler blowdown thermal energy recovery.

(iv) Primary energy resource selection, including

(A) Fuel (primary energy source) switching, and

(B) Applied steam energy versus direct-fired energy versus electricity.

(v) Insulation issues.

(vi) Steam trap and steam leak management.

(vi) Condensate recovery.

(viii) Steam end-use management.

(2) Capabilities and knowledge includes, but is not limited to:

(i) Background, experience, and recognized abilities to perform the assessment activities, data analysis, and report preparation.

(ii) Familiarity with operating and maintenance practices for steam or process heating systems.

(iii) Additional potential steam system improvement opportunities including improving steam turbine operations and reducing steam demand.

(iv) Additional process heating system opportunities including effective utilization of waste heat and use of proper process heating methods.

(v) Boiler-steam turbine cogeneration systems.

(vi) Industry specific steam end-use systems.

Refinery gas means any gas that is generated at a petroleum refinery and is combusted. Refinery gas includes natural gas when the natural gas is combined and combusted in any proportion with a gas generated at a refinery. Refinery gas includes gases generated from other facilities when that gas is combined and combusted in any proportion with gas generated at a refinery.

Regulated gas stream means an offgas stream that is routed to a boiler or process heater for the purpose of achieving compliance with a standard under another subpart of this part or part 60, part 61, or part 65 of this chapter.

Residential boiler means a boiler used to provide heat and/or hot water and/or as part of a residential combined heat and power system. This definition includes boilers located at an institutional facility (e.g., university campus, military base, church grounds) or commercial/industrial facility (e.g., farm) used primarily to provide heat and/or hot water for:

(1) A dwelling containing four or fewer families; or

(2) A single unit residence dwelling that has since been converted or subdivided into condominiums or apartments.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society of Testing and Materials in ASTM D396-10 (incorporated by reference, *see* § 63.14(b)).

Responsible official means responsible official as defined in § 70.2.

Secondary material means the material as defined in § 241.2 of this chapter.

Shutdown means the cessation of operation of a boiler or process heater for any purpose. Shutdown begins either when none of the steam from the boiler is supplied for heating and/or producing electricity, or for any other purpose, or at the point of no fuel being fired in the boiler or process heater, whichever is earlier. Shutdown ends when there is no steam and no heat being supplied and no fuel being fired in the boiler or process heater.

Sloped grate means a unit where the solid fuel is fed to the top of the grate from where it slides downwards; while sliding the fuel first dries and then ignites and burns. The ash is deposited at the bottom of the grate. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a sloped grate design.

Solid fossil fuel includes, but is not limited to, coal, coke, petroleum coke, and tire derived fuel.

Solid fuel means any solid fossil fuel or biomass or bio-based solid fuel.

Startup means either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying steam or heat for heating and/or producing electricity, or for any other purpose, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam or heat from the boiler or process heater is supplied for heating, and/or producing electricity, or for any other purpose.

Steam output means:

(1) For a boiler that produces steam for process or heating only (no power generation), the energy content in terms of MMBtu of the boiler steam output,

(2) For a boiler that cogenerates process steam and electricity (also known as combined heat and power), the total energy output, which is the sum of the energy content of the steam exiting the turbine and sent to process in MMBtu and the energy of the electricity generated converted to MMBtu at a rate of 10,000 Btu per kilowatt-hour generated (10 MMBtu per megawatt-hour), and

(3) For a boiler that generates only electricity, the alternate output-based emission limits would be calculated using Equations 21 through 25 of this section, as appropriate:

(i) For emission limits for boilers in the unit designed to burn solid fuel subcategory use Equation 21 of this section:

$$EL_{OBE} = EL_T \times 12.7 \text{ MMBtu/Mwh} \quad \text{(Eq. 21)}$$

Where:

EL_{OBE} = Emission limit in units of pounds per megawatt-hour.

EL_T = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

(ii) For PM and CO emission limits for boilers in one of the subcategories of units designed to burn coal use Equation 22 of this section:

$$EL_{OBE} = EL_T \times 12.2 \text{ MMBtu/Mwh} \quad \text{(Eq. 22)}$$

Where:

EL_{OBE} = Emission limit in units of pounds per megawatt-hour.

EL_T = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

(iii) For PM and CO emission limits for boilers in one of the subcategories of units designed to burn biomass use Equation 23 of this section:

$$EL_{OBE} = EL_T \times 13.9 \text{ MMBtu/Mwh} \quad \text{(Eq. 23)}$$

Where:

EL_{OBE} = Emission limit in units of pounds per megawatt-hour.

EL_T = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

(iv) For emission limits for boilers in one of the subcategories of units designed to burn liquid fuels use Equation 24 of this section:

$$EL_{OBE} = EL_T \times 13.8 \text{ MMBtu/Mwh} \quad \text{(Eq. 24)}$$

Where:

EL_{OBE} = Emission limit in units of pounds per megawatt-hour.

EL_T = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

(v) For emission limits for boilers in the unit designed to burn gas 2 (other) subcategory, use Equation 25 of this section:

$$EL_{OBE} = EL_T \times 10.4 \text{ MMBtu/Mwh} \quad \text{(Eq. 25)}$$

Where:

EL_{OBE} = Emission limit in units of pounds per megawatt-hour.

EL_T = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

Stoker means a unit consisting of a mechanically operated fuel feeding mechanism, a stationary or moving grate to support the burning of fuel and admit under-grate air to the fuel, an overfire air system to complete combustion, and an ash discharge system. This definition of stoker includes air swept stokers. There are two general types of stokers: Underfeed and overfeed. Overfeed stokers include mass feed and spreader stokers. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a stoker design.

Stoker/sloped grate/other unit designed to burn kiln dried biomass means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and is not in the stoker/sloped grate/other units designed to burn wet biomass subcategory.

Stoker/sloped grate/other unit designed to burn wet biomass means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and any of the biomass/bio-based solid fuel combusted in the unit exceeds 20 percent moisture on an annual heat input basis.

Suspension burner means a unit designed to fire dry biomass/biobased solid particles in suspension that are conveyed in an airstream to the furnace like pulverized coal. The combustion of the fuel material is completed on a grate or floor below. The biomass/biobased fuel combusted in the unit shall not exceed 20 percent moisture on an annual heat input basis. Fluidized bed, dutch oven, pile burner, and hybrid suspension grate units are not part of the suspension burner subcategory.

Temporary boiler means any gaseous or liquid fuel boiler that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A boiler is not a temporary boiler if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The boiler or a replacement remains at a location within the facility and performs the same or similar function for more than 12 consecutive months, unless the regulatory agency approves an extension. An extension may be granted by the regulating agency upon petition by the owner or operator of a unit specifying the basis for such a request. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.

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

(4) The equipment is moved from one location to another within the facility but continues to perform the same or similar function and serve the same electricity, steam, and/or hot water system in an attempt to circumvent the residence time requirements of this definition.

Total selected metals (TSM) means the sum of the following metallic hazardous air pollutants: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium.

Traditional fuel means the fuel as defined in § 241.2 of this chapter.

Tune-up means adjustments made to a boiler or process heater in accordance with the procedures outlined in § 63.7540(a)(10).

Ultra low sulfur liquid fuel means a distillate oil that has less than or equal to 15 ppm sulfur.

Unit designed to burn biomass/bio-based solid subcategory includes any boiler or process heater that burns at least 10 percent biomass or bio-based solids on an annual heat input basis in combination with solid fossil fuels, liquid fuels, or gaseous fuels.

Unit designed to burn coal/solid fossil fuel subcategory includes any boiler or process heater that burns any coal or other solid fossil fuel alone or at least 10 percent coal or other solid fossil fuel on an annual heat input basis in combination with liquid fuels, gaseous fuels, or less than 10 percent biomass and bio-based solids on an annual heat input basis.

Unit designed to burn gas 1 subcategory includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.

Unit designed to burn gas 2 (other) subcategory includes any boiler or process heater that is not in the unit designed to burn gas 1 subcategory and burns any gaseous fuels either alone or in combination with less than 10 percent coal/solid fossil fuel, and less than 10 percent biomass/bio-based solid fuel on an annual heat input basis, and no liquid fuels. Gaseous fuel boilers and process heaters that are not in the unit designed to burn gas 1 subcategory and that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that are not in the unit designed to burn gas 1 subcategory and that burn liquid fuel during periods of gas curtailment or gas supply interruption of any duration are also included in this definition.

Unit designed to burn heavy liquid subcategory means a unit in the unit designed to burn liquid subcategory where at least 10 percent of the heat input from liquid fuels on an annual heat input basis comes from heavy liquids.

Unit designed to burn light liquid subcategory means a unit in the unit designed to burn liquid subcategory that is not part of the unit designed to burn heavy liquid subcategory.

Unit designed to burn liquid subcategory includes any boiler or process heater that burns any liquid fuel, but less than 10 percent coal/solid fossil fuel and less than 10 percent biomass/bio-based solid fuel on an annual heat input basis, either alone or in combination with gaseous fuels. Units in the unit design to burn gas 1 or unit designed to burn gas 2 (other) subcategories that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year are not included in this definition. Units in the unit design to burn gas 1 or unit designed to burn gas 2 (other) subcategories during periods of gas curtailment or gas supply interruption of any duration are also not included in this definition.

Unit designed to burn liquid fuel that is a non-continental unit means an industrial, commercial, or institutional boiler or process heater meeting the definition of the unit designed to burn liquid subcategory located in the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Unit designed to burn solid fuel subcategory means any boiler or process heater that burns only solid fuels or at least 10 percent solid fuel on an annual heat input basis in combination with liquid fuels or gaseous fuels.

Vegetable oil means oils extracted from vegetation.

Voluntary Consensus Standards or VCS mean technical standards (*e.g.,* materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus bodies. EPA/Office of Air Quality Planning and Standards, by precedent, has only used VCS that are written in English. Examples of VCS bodies are: American Society of Testing and Materials (ASTM 100 Barr Harbor Drive, P.O. Box CB700, West Conshohocken, Pennsylvania 19428-B2959, (800) 262-1373, *http://www.astm.org*), American Society of Mechanical Engineers (ASME ASME, Three Park Avenue, New York, NY 10016-5990, (800) 843-2763, *http://www.asme.org*), International Standards Organization (ISO 1, ch. de la Voie-Creuse, Case postale 56, CH-1211 Geneva 20, Switzerland, +41 22 749 01 11, *http://www.iso.org/iso/home.htm*), Standards Australia (AS Level 10, The Exchange Centre, 20 Bridge Street, Sydney, GPO Box 476, Sydney NSW 2001, + 61 2 9237 6171 *http://www.stadards.org.au*), British Standards Institution (BSI, 389 Chiswick High Road, London, W4 4AL, United Kingdom, +44 (0)20 8996 9001, *http://www.bsigroup.com*), Canadian Standards Association (CSA 5060 Spectrum Way, Suite 100, Mississauga, Ontario L4W 5N6, Canada, 800-463-6727, *http://www.csa.ca*), European Committee for Standardization (CEN CENELEC Management Centre Avenue Marnix 17 B-1000 Brussels, Belgium +32 2 550 08 11, *http://www.cen.eu/cen*), and German Engineering Standards (VDI VDI Guidelines Department, P.O. Box 10 11 39 40002, Duesseldorf, Germany, +49 211 6214-230, *http://www.vdi.eu*). The types of standards that are not considered VCS are standards developed by: The United States, *e.g.,* California (CARB) and Texas (TCEQ); industry groups, such as American Petroleum Institute (API), Gas Processors Association (GPA), and Gas Research Institute (GRI); and other branches of the U.S. government, *e.g.,* Department of Defense (DOD) and Department of Transportation (DOT). This does not preclude EPA from using standards developed by groups that are not VCS bodies within their rule. When this occurs, EPA has done searches and reviews for VCS equivalent to these non-EPA methods.

Waste heat boiler means a device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat boilers are also referred to as heat recovery steam generators. Waste heat boilers are heat exchangers generating steam from incoming hot exhaust gas from an industrial (e.g., thermal oxidizer, kiln, furnace) or power (e.g., combustion turbine, engine) equipment. Duct burners are sometimes used to increase the temperature of the incoming hot exhaust gas.

Waste heat process heater means an enclosed device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat process heaters are also referred to as recuperative process heaters. This definition includes both fired and unfired waste heat process heaters.

Wet scrubber means any add-on air pollution control device that mixes an aqueous stream or slurry with the exhaust gases from a boiler or process heater to control emissions of particulate matter or to absorb and neutralize acid gases, such as hydrogen chloride. A wet scrubber creates an aqueous stream or slurry as a byproduct of the emissions control process.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act.

[78 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013]

Table 1 to Subpart DDDDD of Part 63—Emission Limits for New or Reconstructed Boilers and Process Heaters

As stated in § 63.7500, you must comply with the following applicable emission limits:

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel.	a. HCl	2.2E-02 lb per MMBtu of heat input	2.5E-02 lb per MMBtu of steam output or 0.28 lb per MWh	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	8.0E-07 [a]lb per MMBtu of heat input	8.7E-07 [a]lb per MMBtu of steam output or 1.1E-05 [a]lb per MWh	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 4 dscm.
2. Units designed to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	1.1E-03 lb per MMBtu of steam output or 1.4E-02 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 2.9E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
4. Stokers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1.2E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	5.8E-01 lb per MMBtu of steam output or 6.8 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 3.7E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen	4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (4.2E-03 lb per MMBtu of steam output or 5.6E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	2.2E-01 lb per MMBtu of steam output or 2.6 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	9.8E-03 lb per MMBtu of heat input; or (8.3E-05 [a]lb per MMBtu of heat input)	1.2E-02 lb per MMBtu of steam output or 0.14 lb per MWh; or (1.1E-04 [a]lb per MMBtu of steam output or 1.2E-03 [a]lb per MWh)	Collect a minimum of 3 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
10. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	3.1E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (6.6E-03 lb per MMBtu of steam output or 9.1E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	330 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	3.5E-01 lb per MMBtu of steam output or 3.6 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-03 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	4.3E-03 lb per MMBtu of steam output or 4.5E-02 lb per MWh; or (5.2E-05 lb per MMBtu of steam output or 5.5E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solids	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen	1.1 lb per MMBtu of steam output or 1.0E+01 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (2.9E-05 [a]lb per MMBtu of heat input)	3.0E-02 lb per MMBtu of steam output or 2.8E-01 lb per MWh; or (5.1E-05 lb per MMBtu of steam output or 4.1E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,100 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1.4 lb per MMBtu of steam output or 12 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	3.3E-02 lb per MMBtu of steam output or 3.7E-01 lb per MWh; or (5.5E-04 lb per MMBtu of steam output or 6.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.
14. Units designed to burn liquid fuel	a. HCl	4.4E-04 lb per MMBtu of heat input	4.8E-04 lb per MMBtu of steam output or 6.1E-03 lb per MWh	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.8E-07 [a]lb per MMBtu of heat input	5.3E-07 [a]lb per MMBtu of steam output or 6.7E-06 [a]lb per MWh	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 4 dscm.
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-02 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input)	1.5E-02 lb per MMBtu of steam output or 1.8E-01 lb per MWh; or (8.2E-05 lb per MMBtu of steam output or 1.1E-03 lb per MWh)	Collect a minimum of 3 dscm per run.
16. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	0.13 lb per MMBtu of steam output or 1.4 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 [a]lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	1.2E-03 [a]lb per MMBtu of steam output or 1.6E-02 [a]lb per MWh; or (3.2E-05 lb per MMBtu of steam output or 4.0E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	2.5E-02 lb per MMBtu of steam output or 3.2E-01 lb per MWh; or (9.4E-04 lb per MMBtu of steam output or 1.2E-02 lb per MWh)	Collect a minimum of 4 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	0.16 lb per MMBtu of steam output or 1.0 lb per MWh	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	1.2E-02 lb per MMBtu of steam output or 7.0E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[c] If your affected source is a new or reconstructed affected source that commenced construction or reconstruction after June 4, 2010, and before January 31, 2013, you may comply with the emission limits in Tables 11, 12 or 13 to this subpart until January 31, 2016. On and after January 31, 2016, you must comply with the emission limits in Table 1 to this subpart.

[78 FR 7193, Jan. 31, 2013]

Table 2 to Subpart DDDDD of Part 63—Emission Limits for Existing Boilers and Process Heaters

As stated in § 63.7500, you must comply with the following applicable emission limits:

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel	a. HCl	2.2E-02 lb per MMBtu of heat input	2.5E-02 lb per MMBtu of steam output or 0.27 lb per MWh	For M26A, Collect a minimum of 1 dscm per run; for M26, collect a minimum of 120 liters per run.
	b. Mercury	5.7E-06 lb per MMBtu of heat input	6.4E-06 lb per MMBtu of steam output or 7.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 3 dscm.
2. Units design to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	4.0E-02 lb per MMBtu of heat input; or (5.3E-05 lb per MMBtu of heat input)	4.2E-02 lb per MMBtu of steam output or 4.9E-01 lb per MWh; or (5.6E-05 lb per MMBtu of steam output or 6.5E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
4. Stokers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	160 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	0.14 lb per MMBtu of steam output or 1.7 lb per MWh; 3-run average	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1.3E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (720 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1.4 lb per MMBtu of steam output or 17 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.7E-02 lb per MMBtu of heat input; or (2.4E-04 lb per MMBtu of heat input)	4.3E-02 lb per MMBtu of steam output or 5.2E-01 lb per MWh; or (2.8E-04 lb per MMBtu of steam output or 3.4E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen	4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-01 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	3.7E-01 lb per MMBtu of steam output or 4.5 lb per MWh; or (4.6E-03 lb per MMBtu of steam output or 5.6E-02 lb per MWh)	Collect a minimum of 1 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solid	a. CO (or CEMS)	470 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	4.6E-01 lb per MMBtu of steam output or 5.2 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-01 lb per MMBtu of heat input; or (1.2E-03 lb per MMBtu of heat input)	1.4E-01 lb per MMBtu of steam output or 1.6 lb per MWh; or (1.5E-03 lb per MMBtu of steam output or 1.7E-02 lb per MWh)	Collect a minimum of 1 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
10. Suspension burners designed to burn biomass/bio-based solid	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	5.1E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	5.2E-02 lb per MMBtu of steam output or 7.1E-01 lb per MWh; or (6.6E-03 lb per MMBtu of steam output or 9.1E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solid	a. CO (or CEMS)	770 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	8.4E-01 lb per MMBtu of steam output or 8.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.8E-01 lb per MMBtu of heat input; or (2.0E-03 lb per MMBtu of heat input)	3.9E-01 lb per MMBtu of steam output or 3.9 lb per MWh; or (2.8E-03 lb per MMBtu of steam output or 2.8E-02 lb per MWh)	Collect a minimum of 1 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solid	a. CO	1,100 ppm by volume on a dry basis corrected to 3 percent oxygen	2.4 lb per MMBtu of steam output or 12 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (5.8E-03 lb per MMBtu of heat input)	5.5E-02 lb per MMBtu of steam output or 2.8E-01 lb per MWh; or (1.6E-02 lb per MMBtu of steam output or 8.1E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate units designed to burn biomass/bio-based solid	a. CO (or CEMS)	2,800 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	2.8 lb per MMBtu of steam output or 31 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	b. Filterable PM (or TSM)	4.4E-01 lb per MMBtu of heat input; or (4.5E-04 lb per MMBtu of heat input)	5.5E-01 lb per MMBtu of steam output or 6.2 lb per MWh; or (5.7E-04 lb per MMBtu of steam output or 6.3E-03 lb per MWh)	Collect a minimum of 1 dscm per run.
14. Units designed to burn liquid fuel	a. HCl	1.1E-03 lb per MMBtu of heat input	1.4E-03 lb per MMBtu of steam output or 1.6E-02 lb per MWh	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	2.0E-06 lb per MMBtu of heat input	2.5E-06 lb per MMBtu of steam output or 2.8E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B collect a minimum sample as specified in the method, for ASTM D6784 [b]collect a minimum of 2 dscm.
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	6.2E-02 lb per MMBtu of heat input; or (2.0E-04 lb per MMBtu of heat input)	7.5E-02 lb per MMBtu of steam output or 8.6E-01 lb per MWh; or (2.5E-04 lb per MMBtu of steam output or 2.8E-03 lb per MWh)	Collect a minimum of 1 dscm per run.
16. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	0.13 lb per MMBtu of steam output or 1.4 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	7.9E-03 lb per MMBtu of heat input; or (6.2E-05 lb per MMBtu of heat input)	9.6E-03 lb per MMBtu of steam output or 1.1E-01 lb per MWh; or (7.5E-05 lb per MMBtu of steam output or 8.6E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.7E-01 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	3.3E-01 lb per MMBtu of steam output or 3.8 lb per MWh; or (1.1E-03 lb per MMBtu of steam output or 1.2E-02 lb per MWh)	Collect a minimum of 2 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	0.16 lb per MMBtu of steam output or 1.0 lb per MWh	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 2 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input or (2.1E-04 lb per MMBtu of heat input)	1.2E-02 lb per MMBtu of steam output or 7.0E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote a, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[78 FR 7195, Jan. 31, 2013]

Table 3 to Subpart DDDDD of Part 63—Work Practice Standards

As stated in § 63.7500, you must comply with the following applicable work practice standards:

If your unit is . . .	You must meet the following . . .
1. A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid, or a limited use boiler or process heater	Conduct a tune-up of the boiler or process heater every 5 years as specified in § 63.7540.

2. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of less than 10 million Btu per hour in the unit designed to burn heavy liquid or unit designed to burn solid fuel subcategories; or a new or existing boiler or process heater with heat input capacity of less than 10 million Btu per hour, but greater than 5 million Btu per hour, in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid	Conduct a tune-up of the boiler or process heater biennially as specified in § 63.7540.
3. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater	Conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions under this subpart. Units in all other subcategories will conduct this tune-up as a work practice for dioxins/furans.
4. An existing boiler or process heater located at a major source facility, not including limited use units	Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in § 63.7575:
	a. A visual inspection of the boiler or process heater system.
	b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints.
	c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator.
	d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage.
	e. A review of the facility's energy management practices and provide recommendations for improvements consistent with the definition of energy management practices, if identified.
	f. A list of cost-effective energy conservation measures that are within the facility's control.
	g. A list of the energy savings potential of the energy conservation measures identified.
	h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

5. An existing or new boiler or process heater subject to emission limits in Table 1 or 2 or 11 through 13 to this subpart during startup	You must operate all CMS during startup. For startup of a boiler or process heater, you must use one or a combination of the following clean fuels: natural gas, synthetic natural gas, propane, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, and liquefied petroleum gas.
	If you start firing coal/solid fossil fuel, biomass/bio-based solids, heavy liquid fuel, or gas 2 (other) gases, you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, selective non-catalytic reduction (SNCR), and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, SNCR, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose.
	You must comply with all applicable emission limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of startup, as specified in § 63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in § 63.7555.
6. An existing or new boiler or process heater subject to emission limits in Tables 1 or 2 or 11 through 13 to this subpart during shutdown	You must operate all CMS during shutdown. While firing coal/solid fossil fuel, biomass/bio-based solids, heavy liquid fuel, or gas 2 (other) gases during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, SNCR, and SCR.
	You must comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of shutdown, as specified in § 63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in § 63.7555.

[78 FR 7198, Jan. 31, 2013]

Table 4 to Subpart DDDDD of Part 63—Operating Limits for Boilers and Process Heaters

As stated in § 63.7500, you must comply with the applicable operating limits:

When complying with a Table 1, 2, 11, 12, or 13 numerical emission limit using . . .	You must meet these operating limits . . .
1. Wet PM scrubber control on a boiler not using a PM CPMS	Maintain the 30-day rolling average pressure drop and the 30-day rolling average liquid flow rate at or above the lowest one-hour average pressure drop and the lowest one-hour average liquid flow rate, respectively, measured during the most recent performance test demonstrating compliance with the PM emission limitation according to § 63.7530(b) and Table 7 to this subpart.

When complying with a Table 1, 2, 11, 12, or 13 numerical emission limit using . . .	You must meet these operating limits . . .
2. Wet acid gas (HCl) scrubber control on a boiler not using a HCl CEMS	Maintain the 30-day rolling average effluent pH at or above the lowest one-hour average pH and the 30-day rolling average liquid flow rate at or above the lowest one-hour average liquid flow rate measured during the most recent performance test demonstrating compliance with the HCl emission limitation according to § 63.7530(b) and Table 7 to this subpart.
3. Fabric filter control on units not using a PM CPMS	a. Maintain opacity to less than or equal to 10 percent opacity (daily block average); or
	b. Install and operate a bag leak detection system according to § 63.7525 and operate the fabric filter such that the bag leak detection system alert is not activated more than 5 percent of the operating time during each 6-month period.
4. Electrostatic precipitator control on units not using a PM CPMS	a. This option is for boilers and process heaters that operate dry control systems (i.e., an ESP without a wet scrubber). Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity (daily block average); or
	b. This option is only for boilers and process heaters not subject to PM CPMS or continuous compliance with an opacity limit (i.e., COMS). Maintain the 30-day rolling average total secondary electric power input of the electrostatic precipitator at or above the operating limits established during the performance test according to § 63.7530(b) and Table 7 to this subpart.
5. Dry scrubber or carbon injection control on a boiler not using a mercury CEMS	Maintain the minimum sorbent or carbon injection rate as defined in § 63.7575 of this subpart.
6. Any other add-on air pollution control type on units not using a PM CPMS	This option is for boilers and process heaters that operate dry control systems. Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity (daily block average).
7. Fuel analysis	Maintain the fuel type or fuel mixture such that the applicable emission rates calculated according to § 63.7530(c)(1), (2) and/or (3) is less than the applicable emission limits.
8. Performance testing	For boilers and process heaters that demonstrate compliance with a performance test, maintain the operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the most recent performance test.
9. Oxygen analyzer system	For boilers and process heaters subject to a CO emission limit that demonstrate compliance with an O_2analyzer system as specified in § 63.7525(a), maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen concentration measured during the most recent CO performance test, as specified in Table 8. This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in § 63.7525(a).
10. SO_2CEMS	For boilers or process heaters subject to an HCl emission limit that demonstrate compliance with an SO_2CEMS, maintain the 30-day rolling average SO_2emission rate at or below the highest hourly average SO_2concentration measured during the most recent HCl performance test, as specified in Table 8.

[78 FR 7199, Jan. 31, 2013]

Table 5 to Subpart DDDDD of Part 63—Performance Testing Requirements

As stated in § 63.7520, you must comply with the following requirements for performance testing for existing, new or reconstructed affected sources:

To conduct a performance test for the following pollutant...	You must...	Using...
1. Filterable PM	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 to part 60 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-2 to part 60 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the PM emission concentration	Method 5 or 17 (positive pressure fabric filters must use Method 5D) at 40 CFR part 60, appendix A-3 or A-6 of this chapter.
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
2. TSM	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-1 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the TSM emission concentration	Method 29 at 40 CFR part 60, appendix A-8 of this chapter
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
3. Hydrogen chloride	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-2 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-2 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the hydrogen chloride emission concentration	Method 26 or 26A (M26 or M26A) at 40 CFR part 60, appendix A-8 of this chapter.

To conduct a performance test for the following pollutant...	You must...	Using...
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
4. Mercury	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-1 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the mercury emission concentration	Method 29, 30A, or 30B (M29, M30A, or M30B) at 40 CFR part 60, appendix A-8 of this chapter or Method 101A at 40 CFR part 61, appendix B of this chapter, or ASTM Method D6784.[a]
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
5. CO	a. Select the sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine oxygen concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-3 of this chapter, or ASTM D6522-00 (Reapproved 2005), or ANSI/ASME PTC 19.10-1981.[a]
	c. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	d. Measure the CO emission concentration	Method 10 at 40 CFR part 60, appendix A-4 of this chapter. Use a measurement span value of 2 times the concentration of the applicable emission limit.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7200, Jan. 31, 2013]

Table 6 to Subpart DDDDD of Part 63—Fuel Analysis Requirements

As stated in § 63.7521, you must comply with the following requirements for fuel analysis testing for existing, new or reconstructed affected sources. However, equivalent methods (as defined in § 63.7575) may be used in lieu of the prescribed methods at the discretion of the source owner or operator:

To conduct a fuel analysis for the following pollutant . . .	You must . . .	Using . . .
1. Mercury	a. Collect fuel samples	Procedure in § 63.7521(c) or ASTM D5192 [a], or ASTM D7430 [a], or ASTM D6883 [a], or ASTM D2234/D2234M [a](for coal) or EPA 1631 or EPA 1631E or ASTM D6323 [a](for solid), or EPA 821-R-01-013 (for liquid or solid), or ASTM D4177 [a](for liquid), or ASTM D4057 [a](for liquid), or equivalent.
	b. Composite fuel samples	Procedure in § 63.7521(d) or equivalent.

To conduct a fuel analysis for the following pollutant . . .	You must . . .	Using . . .
	c. Prepare composited fuel samples	EPA SW-846-3050B [a](for solid samples), EPA SW-846-3020A [a](for liquid samples), ASTM D2013/D2013M [a](for coal), ASTM D5198 [a](for biomass), or EPA 3050 [a](for solid fuel), or EPA 821-R-01-013 [a](for liquid or solid), or equivalent.
	d. Determine heat content of the fuel type	ASTM D5865 [a](for coal) or ASTM E711 [a](for biomass), or ASTM D5864 [a]for liquids and other solids, or ASTM D240 [a]or equivalent.
	e. Determine moisture content of the fuel type	ASTM D3173 [a], ASTM E871 [a], or ASTM D5864 [a], or ASTM D240, or ASTM D95 [a](for liquid fuels), or ASTM D4006 [a](for liquid fuels), or ASTM D4177 [a](for liquid fuels) or ASTM D4057 [a](for liquid fuels), or equivalent.
	f. Measure mercury concentration in fuel sample	ASTM D6722 [a](for coal), EPA SW-846-7471B [a](for solid samples), or EPA SW-846-7470A [a](for liquid samples), or equivalent.
	g. Convert concentration into units of pounds of mercury per MMBtu of heat content	Equation 8 in § 63.7530.
	h. Calculate the mercury emission rate from the boiler or process heater in units of pounds per million Btu	Equations 10 and 12 in § 63.7530.
2. HCl	a. Collect fuel samples	Procedure in § 63.7521(c) or ASTM D5192 [a], or ASTM D7430 [a], or ASTM D6883 [a], or ASTM D2234/D2234M [a](for coal) or ASTM D6323 [a](for coal or biomass), ASTM D4177 [a](for liquid fuels) or ASTM D4057 [a](for liquid fuels), or equivalent.
	b. Composite fuel samples	Procedure in § 63.7521(d) or equivalent.
	c. Prepare composited fuel samples	EPA SW-846-3050B [a](for solid samples), EPA SW-846-3020A [a](for liquid samples), ASTM D2013/D2013M§[a](for coal), or ASTM D5198§[a](for biomass), or EPA 3050 [a]or equivalent.
	d. Determine heat content of the fuel type	ASTM D5865 [a](for coal) or ASTM E711 [a](for biomass), ASTM D5864, ASTM D240 [a]or equivalent.
	e. Determine moisture content of the fuel type	ASTM D3173 [a]or ASTM E871 [a], or D5864 [a], or ASTM D240 [a], or ASTM D95[a](for liquid fuels), or ASTM D4006 [a](for liquid fuels), or ASTM D4177 [a](for liquid fuels) or ASTM D4057 [a](for liquid fuels) or equivalent.
	f. Measure chlorine concentration in fuel sample	EPA SW-846-9250 [a], ASTM D6721 [a], ASTM D4208 [a](for coal), or EPA SW-846-5050 [a]or ASTM E776 [a](for solid fuel), or EPA SW-846-9056 [a]or SW-846-9076 [a](for solids or liquids) or equivalent.
	g. Convert concentrations into units of pounds of HCl per MMBtu of heat content	Equation 7 in § 63.7530.
	h. Calculate the HCl emission rate from the boiler or process heater in units of pounds per million Btu	Equations 10 and 11 in § 63.7530.
3. Mercury Fuel Specification for other gas 1 fuels	a. Measure mercury concentration in the fuel sample and convert to units of micrograms per cubic meter	Method 30B (M30B) at 40 CFR part 60, appendix A-8 of this chapter or ASTM D5954 [a], ASTM D6350 [a], ISO 6978-1:2003(E) [a], or ISO 6978-2:2003(E) [a], or EPA-1631 [a]or equivalent.

To conduct a fuel analysis for the following pollutant . . .	You must . . .	Using . . .
	b. Measure mercury concentration in the exhaust gas when firing only the other gas 1 fuel is fired in the boiler or process heater	Method 29, 30A, or 30B (M29, M30A, or M30B) at 40 CFR part 60, appendix A-8 of this chapter or Method 101A or Method 102 at 40 CFR part 61, appendix B of this chapter, or ASTM Method D6784 [a]or equivalent.
4. TSM for solid fuels	a. Collect fuel samples	Procedure in § 63.7521(c) or ASTM D5192 [a], or ASTM D7430 [a], or ASTM D6883 [a], or ASTM D2234/D2234M [a](for coal) or ASTM D6323 [a](for coal or biomass), or ASTM D4177 [a],(for liquid fuels)or ASTM D4057 [a](for liquid fuels),or equivalent.
	b. Composite fuel samples	Procedure in § 63.7521(d) or equivalent.
	c. Prepare composited fuel samples	EPA SW-846-3050B [a](for solid samples), EPA SW-846-3020A [a](for liquid samples), ASTM D2013/D2013M [a](for coal), ASTM D5198 [a]or TAPPI T266 [a](for biomass), or EPA 3050 [a]or equivalent.
	d. Determine heat content of the fuel type	ASTM D5865 [a](for coal) or ASTM E711 [a](for biomass), or ASTM D5864 [a]for liquids and other solids, or ASTM D240 [a]or equivalent.
	e. Determine moisture content of the fuel type	ASTM D3173 [a]or ASTM E871 [a], or D5864, or ASTM D240 [a], or ASTM D95 [a](for liquid fuels), or ASTM D4006[a](for liquid fuels), or ASTM D4177 [a](for liquid fuels) or ASTM D4057 [a](for liquid fuels), or equivalent.
	f. Measure TSM concentration in fuel sample	ASTM D3683 [a], or ASTM D4606 [a], or ASTM D6357 [a]or EPA 200.8 [a]or EPA SW-846-6020 [a], or EPA SW-846-6020A [a], or EPA SW-846-6010C [a], EPA 7060 [a]or EPA 7060A [a](for arsenic only), or EPA SW-846-7740 [a](for selenium only).
	g. Convert concentrations into units of pounds of TSM per MMBtu of heat content	Equation 9 in § 63.7530.
	h. Calculate the TSM emission rate from the boiler or process heater in units of pounds per million Btu	Equations 10 and 13 in § 63.7530.

[a] Incorporated by reference, see § 63.14.

[78 FR 7201, Jan. 31, 2013]

Table 7 to Subpart DDDDD of Part 63—Establishing Operating Limits

As stated in § 63.7520, you must comply with the following requirements for establishing operating limits:

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
1. PM, TSM, or mercury	a. Wet scrubber operating parameters	i. Establish a site-specific minimum scrubber pressure drop and minimum flow rate operating limit according to § 63.7530(b)	(1) Data from the scrubber pressure drop and liquid flow rate monitors and the PM or mercury performance test	(a) You must collect scrubber pressure drop and liquid flow rate data every 15 minutes during the entire period of the performance tests.
				(b) Determine the lowest hourly average scrubber pressure drop and liquid flow rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.
	b. Electrostatic precipitator operating parameters (option only for units that operate wet scrubbers)	i. Establish a site-specific minimum total secondary electric power input according to § 63.7530(b)	(1) Data from the voltage and secondary amperage monitors during the PM or mercury performance test	(a) You must collect secondary voltage and secondary amperage for each ESP cell and calculate total secondary electric power input data every 15 minutes during the entire period of the performance tests.
				(b) Determine the average total secondary electric power input by computing the hourly averages using all of the 15-minute readings taken during each performance test.
2. HCl	a. Wet scrubber operating parameters	i. Establish site-specific minimum pressure drop, effluent pH, and flow rate operating limits according to § 63.7530(b)	(1) Data from the pressure drop, pH, and liquid flow-rate monitors and the HCl performance test	(a) You must collect pH and liquid flow-rate data every 15 minutes during the entire period of the performance tests.
				(b) Determine the hourly average pH and liquid flow rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
	b. Dry scrubber operating parameters	i. Establish a site-specific minimum sorbent injection rate operating limit according to § 63.7530(b). If different acid gas sorbents are used during the HCl performance test, the average value for each sorbent becomes the site-specific operating limit for that sorbent	(1) Data from the sorbent injection rate monitors and HCl or mercury performance test	(a) You must collect sorbent injection rate data every 15 minutes during the entire period of the performance tests.
				(b) Determine the hourly average sorbent injection rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.
				(c) Determine the lowest hourly average of the three test run averages established during the performance test as your operating limit. When your unit operates at lower loads, multiply your sorbent injection rate by the load fraction (e.g., for 50 percent load, multiply the injection rate operating limit by 0.5) to determine the required injection rate.
	c. Alternative Maximum SO_2emission rate	i. Establish a site-specific maximum SO_2emission rate operating limit according to § 63.7530(b)	(1) Data from SO_2CEMS and the HCl performance test	(a) You must collect the SO_2emissions data according to § 63.7525(m) during the most recent HCl performance tests.
				(b) The maximum SO_2emission rate is equal to the lowest hourly average SO_2emission rate measured during the most recent HCl performance tests.
3. Mercury	a. Activated carbon injection	i. Establish a site-specific minimum activated carbon injection rate operating limit according to § 63.7530(b)	(1) Data from the activated carbon rate monitors and mercury performance test	(a) You must collect activated carbon injection rate data every 15 minutes during the entire period of the performance tests.
				(b) Determine the hourly average activated carbon injection rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
				(c) Determine the lowest hourly average established during the performance test as your operating limit. When your unit operates at lower loads, multiply your activated carbon injection rate by the load fraction (e.g., actual heat input divided by heat input during performance test, for 50 percent load, multiply the injection rate operating limit by 0.5) to determine the required injection rate.
4. Carbon monoxide	a. Oxygen	i. Establish a unit-specific limit for minimum oxygen level according to § 63.7520	(1) Data from the oxygen analyzer system specified in § 63.7525(a)	(a) You must collect oxygen data every 15 minutes during the entire period of the performance tests.
				(b) Determine the hourly average oxygen concentration by computing the hourly averages using all of the 15-minute readings taken during each performance test.
				(c) Determine the lowest hourly average established during the performance test as your minimum operating limit.
5. Any pollutant for which compliance is demonstrated by a performance test	a. Boiler or process heater operating load	i. Establish a unit specific limit for maximum operating load according to § 63.7520(c)	(1) Data from the operating load monitors or from steam generation monitors	(a) You must collect operating load or steam generation data every 15 minutes during the entire period of the performance test.
				(b) Determine the average operating load by computing the hourly averages using all of the 15-minute readings taken during each performance test.
				(c) Determine the average of the three test run averages during the performance test, and multiply this by 1.1 (110 percent) as your operating limit.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7203, Jan. 31, 2013]

Table 8 to Subpart DDDDD of Part 63—Demonstrating Continuous Compliance

As stated in § 63.7540, you must show continuous compliance with the emission limitations for each boiler or process heater according to the following:

If you must meet the following operating limits or work practice standards . . .	You must demonstrate continuous compliance by . . .
1. Opacity	a. Collecting the opacity monitoring system data according to § 63.7525(c) and § 63.7535; and
	b. Reducing the opacity monitoring data to 6-minute averages; and
	c. Maintaining opacity to less than or equal to 10 percent (daily block average).
2. PM CPMS	a. Collecting the PM CPMS output data according to § 63.7525;
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average PM CPMS output data to less than the operating limit established during the performance test according to § 63.7530(b)(4).
3. Fabric Filter Bag Leak Detection Operation	Installing and operating a bag leak detection system according to § 63.7525 and operating the fabric filter such that the requirements in § 63.7540(a)(9) are met.
4. Wet Scrubber Pressure Drop and Liquid Flow-rate	a. Collecting the pressure drop and liquid flow rate monitoring system data according to §§ 63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average pressure drop and liquid flow-rate at or above the operating limits established during the performance test according to § 63.7530(b).
5. Wet Scrubber pH	a. Collecting the pH monitoring system data according to §§ 63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average pH at or above the operating limit established during the performance test according to § 63.7530(b).
6. Dry Scrubber Sorbent or Carbon Injection Rate	a. Collecting the sorbent or carbon injection rate monitoring system data for the dry scrubber according to §§ 63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average sorbent or carbon injection rate at or above the minimum sorbent or carbon injection rate as defined in § 63.7575.
7. Electrostatic Precipitator Total Secondary Electric Power Input	a. Collecting the total secondary electric power input monitoring system data for the electrostatic precipitator according to §§ 63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average total secondary electric power input at or above the operating limits established during the performance test according to § 63.7530(b).
8. Emission limits using fuel analysis	a. Conduct monthly fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart; and
	b. Reduce the data to 12-month rolling averages; and
	c. Maintain the 12-month rolling average at or below the applicable emission limit for HCl or mercury or TSM in Tables 1 and 2 or 11 through 13 to this subpart.
9. Oxygen content	a. Continuously monitor the oxygen content using an oxygen analyzer system according to § 63.7525(a). This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in § 63.7525(a)(2).
	b. Reducing the data to 30-day rolling averages; and

If you must meet the following operating limits or work practice standards . . .	You must demonstrate continuous compliance by . . .
	c. Maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen level measured during the most recent CO performance test.
10. Boiler or process heater operating load	a. Collecting operating load data or steam generation data every 15 minutes.
	b. Maintaining the operating load such that it does not exceed 110 percent of the highest hourly average operating load recorded during the most recent performance test according to § 63.7520(c).
11. SO_2emissions using SO_2CEMS	a. Collecting the SO_2CEMS output data according to § 63.7525;
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average SO_2CEMS emission rate to a level at or below the minimum hourly SO_2rate measured during the most recent HCl performance test according to § 63.7530.

[78 FR 7204, Jan. 31, 2013]

Table 9 to Subpart DDDDD of Part 63—Reporting Requirements

As stated in § 63.7550, you must comply with the following requirements for reports:

You must submit a(n)	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. Information required in § 63.7550(c)(1) through (5); and	Semiannually, annually, biennially, or every 5 years according to the requirements in § 63.7550(b).
	b. If there are no deviations from any emission limitation (emission limit and operating limit) that applies to you and there are no deviations from the requirements for work practice standards in Table 3 to this subpart that apply to you, a statement that there were no deviations from the emission limitations and work practice standards during the reporting period. If there were no periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which the CMSs were out-of-control during the reporting period; and	
	c. If you have a deviation from any emission limitation (emission limit and operating limit) where you are not using a CMS to comply with that emission limit or operating limit, or a deviation from a work practice standard during the reporting period, the report must contain the information in § 63.7550(d); and	
	d. If there were periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in § 63.8(c)(7), or otherwise not operating, the report must contain the information in § 63.7550(e)	

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7205, Jan. 31, 2013]

Table 10 to Subpart DDDDD of Part 63—Applicability of General Provisions to Subpart DDDDD

As stated in § 63.7565, you must comply with the applicable General Provisions according to the following:

Citation	Subject	Applies to subpart DDDDD
§ 63.1	Applicability	Yes.
§ 63.2	Definitions	Yes. Additional terms defined in § 63.7575
§ 63.3	Units and Abbreviations	Yes.
§ 63.4	Prohibited Activities and Circumvention	Yes.
§ 63.5	Preconstruction Review and Notification Requirements	Yes.
§ 63.6(a), (b)(1)-(b)(5), (b)(7), (c)	Compliance with Standards and Maintenance Requirements	Yes.
§ 63.6(e)(1)(i)	General duty to minimize emissions.	No. See § 63.7500(a)(3) for the general duty requirement.
§ 63.6(e)(1)(ii)	Requirement to correct malfunctions as soon as practicable.	No.
§ 63.6(e)(3)	Startup, shutdown, and malfunction plan requirements.	No.
§ 63.6(f)(1)	Startup, shutdown, and malfunction exemptions for compliance with non-opacity emission standards.	No.
§ 63.6(f)(2) and (3)	Compliance with non-opacity emission standards.	Yes.
§ 63.6(g)	Use of alternative standards	Yes.
§ 63.6(h)(1)	Startup, shutdown, and malfunction exemptions to opacity standards.	No. See § 63.7500(a).
§ 63.6(h)(2) to (h)(9)	Determining compliance with opacity emission standards	Yes.
§ 63.6(i)	Extension of compliance	Yes. Note: Facilities may also request extensions of compliance for the installation of combined heat and power, waste heat recovery, or gas pipeline or fuel feeding infrastructure as a means of complying with this subpart.
§ 63.6(j)	Presidential exemption.	Yes.
§ 63.7(a), (b), (c), and (d)	Performance Testing Requirements	Yes.
§ 63.7(e)(1)	Conditions for conducting performance tests	No. Subpart DDDDD specifies conditions for conducting performance tests at § 63.7520(a) to (c).
§ 63.7(e)(2)-(e)(9), (f), (g), and (h)	Performance Testing Requirements	Yes.
§ 63.8(a) and (b)	Applicability and Conduct of Monitoring	Yes.

Citation	Subject	Applies to subpart DDDDD
§ 63.8(c)(1)	Operation and maintenance of CMS	Yes.
§ 63.8(c)(1)(i)	General duty to minimize emissions and CMS operation	No. See § 63.7500(a)(3).
§ 63.8(c)(1)(ii)	Operation and maintenance of CMS	Yes.
§ 63.8(c)(1)(iii)	Startup, shutdown, and malfunction plans for CMS	No.
§ 63.8(c)(2) to (c)(9)	Operation and maintenance of CMS	Yes.
§ 63.8(d)(1) and (2)	Monitoring Requirements, Quality Control Program	Yes.
§ 63.8(d)(3)	Written procedures for CMS	Yes, except for the last sentence, which refers to a startup, shutdown, and malfunction plan. Startup, shutdown, and malfunction plans are not required.
§ 63.8(e)	Performance evaluation of a CMS	Yes.
§ 63.8(f)	Use of an alternative monitoring method.	Yes.
§ 63.8(g)	Reduction of monitoring data	Yes.
§ 63.9	Notification Requirements	Yes.
§ 63.10(a), (b)(1)	Recordkeeping and Reporting Requirements	Yes.
§ 63.10(b)(2)(i)	Recordkeeping of occurrence and duration of startups or shutdowns	Yes.
§ 63.10(b)(2)(ii)	Recordkeeping of malfunctions	No. See § 63.7555(d)(7) for recordkeeping of occurrence and duration and § 63.7555(d)(8) for actions taken during malfunctions.
§ 63.10(b)(2)(iii)	Maintenance records	Yes.
§ 63.10(b)(2)(iv) and (v)	Actions taken to minimize emissions during startup, shutdown, or malfunction	No.
§ 63.10(b)(2)(vi)	Recordkeeping for CMS malfunctions	Yes.
§ 63.10(b)(2)(vii) to (xiv)	Other CMS requirements	Yes.
§ 63.10(b)(3)	Recordkeeping requirements for applicability determinations	No.
§ 63.10(c)(1) to (9)	Recordkeeping for sources with CMS	Yes.
§ 63.10(c)(10) and (11)	Recording nature and cause of malfunctions, and corrective actions	No. See § 63.7555(d)(7) for recordkeeping of occurrence and duration and § 63.7555(d)(8) for actions taken during malfunctions.
§ 63.10(c)(12) and (13)	Recordkeeping for sources with CMS	Yes.
§ 63.10(c)(15)	Use of startup, shutdown, and malfunction plan	No.

Citation	Subject	Applies to subpart DDDDD
§ 63.10(d)(1) and (2)	General reporting requirements	Yes.
§ 63.10(d)(3)	Reporting opacity or visible emission observation results	No.
§ 63.10(d)(4)	Progress reports under an extension of compliance	Yes.
§ 63.10(d)(5)	Startup, shutdown, and malfunction reports	No. See § 63.7550(c)(11) for malfunction reporting requirements.
§ 63.10(e)	Additional reporting requirements for sources with CMS	Yes.
§ 63.10(f)	Waiver of recordkeeping or reporting requirements	Yes.
§ 63.11	Control Device Requirements	No.
§ 63.12	State Authority and Delegation	Yes.
§ 63.13-63.16	Addresses, Incorporation by Reference, Availability of Information, Performance Track Provisions	Yes.
§ 63.1(a)(5),(a)(7)-(a)(9), (b)(2), (c)(3)-(4), (d), 63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv), 63.8(a)(3), 63.9(b)(3), (h)(4), 63.10(c)(2)-(4), (c)(9).	Reserved	No.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7205, Jan. 31, 2013]

Table 11 to Subpart DDDDD of Part 63—Toxic Equivalency Factors for Dioxins/Furans

Table 11 to Subpart DDDDD of Part 63—Toxic Equivalency Factors for Dioxins/Furans

Dioxin/furan congener	Toxic equivalency factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin	1
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01
octachlorinated dibenzo-p-dioxin	0.0003
2,3,7,8-tetrachlorinated dibenzofuran	0.1
2,3,4,7,8-pentachlorinated dibenzofuran	0.3
1,2,3,7,8-pentachlorinated dibenzofuran	0.03
1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran	0.1

Dioxin/furan congener	Toxic equivalency factor
1,2,3,4,6,7,8-heptachlorinated dibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran	0.01
octachlorinated dibenzofuran	0.0003

[76 FR 15664, Mar. 21, 2011]

EDITORIAL NOTE: At 78 FR 7206, Jan. 31, 2013, Table 11 was added, effective Apr. 1, 2013. However Table 11 could not be added as a Table 11 is already in existence.

Table 12 to Subpart DDDDD of Part 63—Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After June 4, 2010, and Before May 20, 2011

If your boiler or process heater is in this subcategory	For the following pollutants	The emissions must not exceed the following emission limits, except during periods of startup and shutdown	Using this specified sampling volume or test run duration
1. Units in all subcategories designed to burn solid fuel	a. Mercury	3.5E-06 lb per MMBtu of heat input	For M29, collect a minimum of 2 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [a]collect a minimum of 2 dscm.
2. Units in all subcategories designed to burn solid fuel that combust at least 10 percent biomass/bio-based solids on an annual heat input basis and less than 10 percent coal/solid fossil fuels on an annual heat input basis	a. Particulate Matter	0.008 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr)	Collect a minimum of 1 dscm per run.
	b. Hydrogen Chloride	0.004 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run.
3. Units in all subcategories designed to burn solid fuel that combust at least 10 percent coal/solid fossil fuels on an annual heat input basis and less than 10 percent biomass/bio-based solids on an annual heat input basis	a. Particulate Matter	0.0011 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr)	Collect a minimum of 3 dscm per run.
	b. Hydrogen Chloride	0.0022 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run.
4. Units designed to burn pulverized coal/solid fossil fuel	a. CO	90 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.003 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
5. Stokers designed to burn coal/solid fossil fuel	a. CO	7 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory	For the following pollutants	The emissions must not exceed the following emission limits, except during periods of startup and shutdown	Using this specified sampling volume or test run duration
	b. Dioxins/Furans	0.003 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
6. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO	30 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.002 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
7. Stokers designed to burn biomass/bio-based solids	a. CO	560 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.005 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
8. Fluidized bed units designed to burn biomass/bio-based solids	a. CO	260 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.02 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
9. Suspension burners/Dutch Ovens designed to burn biomass/bio-based solids	a. CO	1,010 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.2 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
10. Fuel cells designed to burn biomass/bio-based solids	a. CO	470 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.003 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
11. Hybrid suspension/grate units designed to burn biomass/bio-based solids	a. CO	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.2 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
12. Units designed to burn liquid fuel	a. Particulate Matter	0.002 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr)	Collect a minimum of 2 dscm per run.
	b. Hydrogen Chloride	0.0032 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run.

If your boiler or process heater is in this subcategory	For the following pollutants	The emissions must not exceed the following emission limits, except during periods of startup and shutdown	Using this specified sampling volume or test run duration
	c. Mercury	3.0E-07 lb per MMBtu of heat input	For M29, collect a minimum of 2 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [a]collect a minimum of 2 dscm.
	d. CO	3 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	e. Dioxins/Furans	0.002 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
13. Units designed to burn liquid fuel located in non-continental States and territories	a. Particulate Matter	0.002 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr)	Collect a minimum of 2 dscm per run.
	b. Hydrogen Chloride	0.0032 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run.
	c. Mercury	7.8E-07 lb per MMBtu of heat input	For M29, collect a minimum of 1 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [a]collect a minimum of 2 dscm.
	d. CO	51 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	e. Dioxins/Furans	0.002 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
14. Units designed to burn gas 2 (other) gases	a. Particulate Matter	0.0067 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr)	Collect a minimum of 1 dscm per run.
	b. Hydrogen Chloride	0.0017 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	For M29, collect a minimum of 1 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [a]collect a minimum of 2 dscm.

If your boiler or process heater is in this subcategory	For the following pollutants	The emissions must not exceed the following emission limits, except during periods of startup and shutdown	Using this specified sampling volume or test run duration
	d. CO	3 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	e. Dioxins/Furans	0.08 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.

[a] Incorporated by reference, see § 63.14.

[76 FR 15664, Mar. 21, 2011]

EDITORIAL NOTE: At 78 FR 7208, Jan. 31, 2013, Table 12 was added, effective Apr. 1, 2013. However, Table 12 could not be added as a Table 12 is already in existence.

Table 13 to Subpart DDDDD of Part 63—Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After December 23, 2011, and Before January 31, 2013

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel	a. HCl	0.022 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	8.6E-07 [a]lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 4 dscm.
2. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.8E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
3. Stokers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.8E-02 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
4. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
5. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
6. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (410 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
7. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-01 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
8. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	9.8E-03 lb per MMBtu of heat input; or (8.3E-05 [a]lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
9. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	5.1E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
10. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	810 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	b. Filterable PM (or TSM)	3.6E-02 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
11. Fuel cell units designed to burn biomass/bio-based solids	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
12. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
13. Units designed to burn liquid fuel	a. HCl	1.2E-03 lb per MMBtu of heat input	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.9E-07 [a]lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 4 dscm.
14. Units designed to burn heavy liquid fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (18 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-03 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
15. Units designed to burn light liquid fuel	a. CO (or CEMS)	130 [a]ppm by volume on a dry basis corrected to 3 percent oxygen; or (60 ppm by volume on a dry basis corrected to 3 percent oxygen, 1-day block average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 [a]lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
16. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test; or (91 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-hour rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
17. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	b. HCl	1.7E-03 lb per MMBtu of heat input	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit and you are not required to conduct testing for CEMS or CPMS monitor certification, you can skip testing according to § 63.7515 if all of the other provision of § 63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[78 FR 7210, Jan. 31, 2013]

Attachment E

Part 70 Operating Permit Renewal No: T089-36144-00203

[Downloaded from the eCFR on September 30, 2014]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

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

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

What This Subpart Covers

§60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in paragraphs (a)(1) through (4) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines;

(ii) The model year listed in Table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are:

(i) Manufactured after April 1, 2006, and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.

(4) The provisions of §60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

(e) Owners and operators of facilities with CI ICE that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

Emission Standards for Manufacturers

§60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(3) Their 2013 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(e) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards and other requirements for new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.110, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(f) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary non-emergency CI ICE identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 1 to 40 CFR 1042.1 identifies 40 CFR part 1042 as being applicable, 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Areas of Alaska not accessible by the Federal Aid Highway System (FAHS); and

(2) Marine offshore installations.

(g) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power, and displacement of the reconstructed stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

§60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants for model year 2007 engines, and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the certification emission standards for new nonroad CI engines for engines of the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants.

(c) [Reserved]

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

(e) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder;

(3) Their 2013 model year emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder; and

(4) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(f) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE to the certification emission standards and other requirements applicable to Tier 3 new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power less than 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(g) Notwithstanding the requirements in paragraphs (a) through (d) of this section, stationary emergency CI internal combustion engines identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 2 to 40 CFR 1042.101 identifies Tier 3 standards as being applicable, the requirements applicable to Tier 3 engines in 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Areas of Alaska not accessible by the FAHS; and

(2) Marine offshore installations.

(h) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (f) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed emergency stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011]

§60.4203 How long must my engines meet the emission standards if I am a manufacturer of stationary CI internal combustion engines?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§60.4201 and 60.4202 during the certified emissions life of the engines.

[76 FR 37968, June 28, 2011]

Emission Standards for Owners and Operators

§60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the following requirements:

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

(i) 17.0 grams per kilowatt-hour (g/KW-hr) (12.7 grams per horsepower-hr (g/HP-hr)) when maximum engine speed is less than 130 revolutions per minute (rpm);

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

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

(2) For engines installed on or after January 1, 2012 and before January 1, 2016, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

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

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

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

(3) For engines installed on or after January 1, 2016, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 3.4 g/KW-hr (2.5 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $9.0 \cdot n^{-0.20}$ g/KW-hr ($6.7 \cdot n^{-0.20}$ g/HP-hr) where n (maximum engine speed) is 130 or more but less than 2,000 rpm; and

(iii) 2.0 g/KW-hr (1.5 g/HP-hr) where maximum engine speed is greater than or equal to 2,000 rpm.

(4) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

(d) Owners and operators of non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the not-to-exceed (NTE) standards as indicated in §60.4212.

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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011]

§60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in Table 1 to this subpart. Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in this section.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[76 FR 37969, June 28, 2011]

Fuel Requirements for Owners and Operators

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

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

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

(c) [Reserved]

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

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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011; 78 FR 6695, Jan. 30, 2013]

Other Requirements for Owners and Operators

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

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Compliance Requirements

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

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

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

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

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

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

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

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

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

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.

(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate.

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

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

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

such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts.

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

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

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

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

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

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

§60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under paragraph (g) of this section:

(1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

(2) Change only those emission-related settings that are permitted by the manufacturer; and

(3) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

(1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in §60.4212, as applicable.

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section.

(d) If you are an owner or operator and must comply with the emission standards specified in §60.4204(c) or §60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

(1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in §60.4213.

(2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

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

(ii) A discussion of the relationship between these parameters and NO_X and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit NO_X and PM emissions;

(iii) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(iv) A discussion identifying the methods and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

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

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in §60.4213.

(e) If you are an owner or operator of a modified or reconstructed stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(e) or §60.4205(f), you must demonstrate compliance according to one of the methods specified in paragraphs (e)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in §60.4204(e) or §60.4205(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in §60.4212 or §60.4213, as appropriate. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

(f) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (f)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraph (f)(3)(i) of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the

engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]

(g) If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

(1) If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

(2) If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

(3) If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

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

Testing Requirements for Owners and Operators

§60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (e) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F, for stationary CI ICE with a displacement of less than 10 liters per cylinder, and according to 40 CFR part 1042, subpart F, for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \qquad \text{(Eq. 1)}$$

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

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

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

Where:

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

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

(e) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1042 must not exceed the NTE standards for the same model year and maximum engine power as required in 40 CFR 1042.101(c).

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

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

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

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

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

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

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

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

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 2)}$$

Where:

C_i = concentration of NO_X or PM at the control device inlet,

C_o = concentration of NO_X or PM at the control device outlet, and

R = percent reduction of NO_X or PM emissions.

(2) You must normalize the NO_X or PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O_2) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO_2) using the procedures described in paragraph (d)(3) of this section.

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

Where:

C_{adj} = Calculated NO_X or PM concentration adjusted to 15 percent O_2.

C_d = Measured concentration of NO_X or PM, uncorrected.

5.9 = 20.9 percent O_2−15 percent O_2, the defined O_2 correction value, percent.

$\%O_2$ = Measured O_2 concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent O_2 and CO_2 concentration is measured in lieu of O_2 concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (d)(3)(i) through (iii) of this section.

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

$$F_o = \frac{0.209 F_d}{F_c} \qquad \text{(Eq. 4)}$$

Where:

F_o = Fuel factor based on the ratio of O_2 volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is O_2, percent/100.

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

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/106 Btu).

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2, as follows:

$$X_{CO_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 5)}$$

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 NO_X and PM gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \qquad \text{(Eq. 6)}$$

Where:

C_{adj} = Calculated NO_X or PM concentration adjusted to 15 percent O_2.

C_d = Measured concentration of NO_X or PM, uncorrected.

$\%CO_2$ = Measured CO_2 concentration, dry basis, percent.

(e) To determine compliance with the NO_X mass per unit output emission limitation, convert the concentration of NO_X in the engine exhaust using Equation 7 of this section:

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

Where:

ER = Emission rate in grams per KW-hour.

C_d = Measured NO_X concentration in ppm.

1.912×10^{-3} = Conversion constant for ppm NO_X to grams per standard cubic meter at 25 degrees Celsius.

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

T = Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

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

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

Where:

ER = Emission rate in grams per KW-hour.

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

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

T = Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

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

Notification, Reports, and Records for Owners and Operators

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

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

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

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

(ii) The address of the affected source;

(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

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

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

(ii) Maintenance conducted on the engine.

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

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

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

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

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

(1) The report must contain the following information:

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

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

(iii) Engine site rating and model year.

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

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

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

(vii) Hours spent for operation for the purposes specified in §60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

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

[71 FR 39172, July 11, 2006, as amended at 78 FR 6696, Jan. 30, 2013]

Special Requirements

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

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

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

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

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

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

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

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

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

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

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

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

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

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

§60.4216 What requirements must I meet for engines used in Alaska?

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

(b) Except as indicated in paragraph (c) of this section, manufacturers, owners and operators of stationary CI ICE with a displacement of less than 10 liters per cylinder located in areas of Alaska not accessible by the FAHS may meet the requirements of this subpart by manufacturing and installing engines meeting the requirements of 40 CFR parts 94 or 1042, as appropriate, rather than the otherwise applicable requirements of 40 CFR parts 89 and 1039, as indicated in sections §§60.4201(f) and 60.4202(g) of this subpart.

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

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

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

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

[76 FR 37971, June 28, 2011]

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

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

[76 FR 37972, June 28, 2011]

General Provisions

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

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

Definitions

§60.4219 What definitions apply to this subpart?

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

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

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

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

Date of manufacture means one of the following things:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Subpart means 40 CFR part 60, subpart IIII.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011; 78 FR 6696, Jan. 30, 2013]

Table 1 to Subpart IIII of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007-2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder

[As stated in §§60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007-2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NO_X	HC	NO_X	CO	PM
KW<8 (HP<11)	10.5 (7.8)			8.0 (6.0)	1.0 (0.75)
8≤KW<19 (11≤HP<25)	9.5 (7.1)			6.6 (4.9)	0.80 (0.60)
19≤KW<37 (25≤HP<50)	9.5 (7.1)			5.5 (4.1)	0.80 (0.60)
37≤KW<56 (50≤HP<75)			9.2 (6.9)		
56≤KW<75 (75≤HP<100)			9.2 (6.9)		
75≤KW<130 (100≤HP<175)			9.2 (6.9)		
130≤KW<225 (175≤HP<300)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
225≤KW<450 (300≤HP<600)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
450≤KW≤560 (600≤HP≤750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
KW>560 (HP>750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

Table 2 to Subpart IIII of Part 60—Emission Standards for 2008 Model Year and Later Emergency Stationary CI ICE <37 KW (50 HP) With a Displacement of <10 Liters per Cylinder

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

Engine power	Emission standards for 2008 model year and later emergency stationary CI ICE <37 KW (50 HP) with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)			
	Model year(s)	NO_X + NMHC	CO	PM
KW<8 (HP<11)	2008+	7.5 (5.6)	8.0 (6.0)	0.40 (0.30)
8≤KW<19 (11≤HP<25)	2008+	7.5 (5.6)	6.6 (4.9)	0.40 (0.30)
19≤KW<37 (25≤HP<50)	2008+	7.5 (5.6)	5.5 (4.1)	0.30 (0.22)

Table 3 to Subpart IIII of Part 60—Certification Requirements for Stationary Fire Pump Engines

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

Engine power	Starting model year engine manufacturers must certify new stationary fire pump engines according to §60.4202(d)[1]
KW<75 (HP<100)	2011
75≤KW<130 (100≤HP<175)	2010
130≤KW≤560 (175≤HP≤750)	2009
KW>560 (HP>750)	2008

[1]Manufacturers of fire pump stationary CI ICE with a maximum engine power greater than or equal to 37 kW (50 HP) and less than 450 KW (600 HP) and a rated speed of greater than 2,650 revolutions per minute (rpm) are not required to certify such engines until three model years following the model year indicated in this Table 3 for engines in the applicable engine power category.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011]

Table 4 to Subpart IIII of Part 60—Emission Standards for Stationary Fire Pump Engines

[As stated in §§60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	NMHC + NO_X	CO	PM
KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011+	7.5 (5.6)		0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011+	7.5 (5.6)		0.40 (0.30)
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)

Maximum engine power	Model year(s)	NMHC + NO_X	CO	PM
	2011+	7.5 (5.6)		0.30 (0.22)
37≤KW<56 (50≤HP<75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+[1]	4.7 (3.5)		0.40 (0.30)
56≤KW<75 (75≤HP<100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+[1]	4.7 (3.5)		0.40 (0.30)
75≤KW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010+[2]	4.0 (3.0)		0.30 (0.22)
130≤KW<225 (175≤HP<300)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+[3]	4.0 (3.0)		0.20 (0.15)
225≤KW<450 (300≤HP<600)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+[3]	4.0 (3.0)		0.20 (0.15)
450≤KW≤560 (600≤HP≤750)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+	4.0 (3.0)		0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2008+	6.4 (4.8)		0.20 (0.15)

[1]For model years 2011-2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.

[2]For model years 2010-2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

[3]In model years 2009-2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

Table 5 to Subpart IIII of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines

[You must comply with the labeling requirements in §60.4210(f) and the recordkeeping requirements in §60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

Engine power	Starting model year
19≤KW<56 (25≤HP<75)	2013
56≤KW<130 (75≤HP<175)	2012
KW≥130 (HP≥175)	2011

Table 6 to Subpart IIII of Part 60—Optional 3-Mode Test Cycle for Stationary Fire Pump Engines

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

Mode No.	Engine speed[1]	Torque (percent)[2]	Weighting factors
1	Rated	100	0.30
2	Rated	75	0.50
3	Rated	50	0.20

[1]Engine speed: ±2 percent of point.

[2]Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.

Table 7 to Subpart IIII of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥30 Liters per Cylinder

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

Each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary CI internal combustion engine with a displacement of ≥ 30 liters per cylinder	a. Reduce NO_X emissions by 90 percent or more;	i. Select the sampling port location and number/location of traverse points at the inlet and outlet of the control device;		(a) For NO_X, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Measure O_2 at the inlet and outlet of the control device;	(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for NO_X concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(2) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurements for NO_X concentration.

Each	Complying with the requirement to	You must	Using	According to the following requirements
		iv. Measure NO_X at the inlet and outlet of the control device.	(3) Method 7E of 40 CFR part 60, appendix A-4, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(d) NO_X 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.
	b. Limit the concentration of NO_X in the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and number/location of traverse points at the exhaust of the stationary internal combustion engine;		(a) For NO_X, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O_2 concentration must be made at the same time as the measurement for NO_X concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(2) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurement for NO_X concentration.
		iv. Measure NO_X at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device.	(3) Method 7E of 40 CFR part 60, Appendix A-4, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(d) NO_X 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.

Each	Complying with the requirement to	You must	Using	According to the following requirements
	c. Reduce PM emissions by 60 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2 at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(3) Method 4 of 40 CFR part 60, appendix A-3	(c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the inlet and outlet of the control device.	(4) Method 5 of 40 CFR part 60, appendix A-3	(d) PM concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	d. Limit the concentration of PM in the stationary CI internal combustion engine exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(3) Method 4 of 40 CFR part 60, appendix A-3	(c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the exhaust of the stationary internal combustion engine.	(4) Method 5 of 40 CFR part 60, appendix A-3.	(d) PM concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

[79 FR 11251, Feb. 27, 2014]

Table 8 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII

[As stated in §60.4218, you must comply with the following applicable General Provisions:]

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4219.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4214(a).
§60.8	Performance tests	Yes	Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart IIII.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	Yes	Except that §60.13 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder.
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

Attachment F

Part 70 Operating Permit Renewal No: T089-36144-00203

[Downloaded from the eCFR on July 23, 2014]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

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

Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Source: 69 FR 33506, June 15, 2004, unless otherwise noted.

What This Subpart Covers

§63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

§63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in §63.6675, which includes operating according to the provisions specified in §63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008; 78 FR 6700, Jan. 30, 2013]

§63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) *New stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) *Reconstructed stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(b) *Stationary RICE subject to limited requirements.* (1) An affected source which meets either of the criteria in paragraphs (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(f).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of §63.6645(f) and the requirements of §§63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;

(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010; 78 FR 6700, Jan. 30, 2013]

§63.6595 When do I have to comply with this subpart?

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 78 FR 6701, Jan. 30, 2013]

Emission and Operating Limitations

§63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

§63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

§63.6602 What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations and other requirements in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

[78 FR 6701, Jan. 30, 2013]

§63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either paragraph (b)(1) or (2) of this section, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meet either paragraph (b)(1) or (2) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets paragraphs (b)(2)(i), (ii), and (iii) of this section.

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

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in 40 CFR 55.2, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

(1) Change oil every 1,000 hours of operation or annually, whichever comes first. Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(4) Inspect all flexible hoses every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in §63.6625(g). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in §63.6625(g) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112, you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart IIII instead of the emission limitations and other requirements that would otherwise apply under this part for existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions.

(f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in §63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in §63.6675 of this subpart as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in §63.6675 of this subpart, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6701, Jan. 30, 2013]

§63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?

(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) Beginning January 1, 2015, if you own or operate a new emergency CI stationary RICE with a site rating of more than 500 brake HP and a displacement of less than 30 liters per cylinder located at a major source of HAP that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2), or are on offshore vessels that meet §63.6603(c) are exempt from the requirements of this section.

[78 FR 6702, Jan. 30, 2013]

General Compliance Requirements

§63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[75 FR 9675, Mar. 3, 2010, as amended at 78 FR 6702, Jan. 30, 2013]

Testing and Initial Compliance Requirements

§63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

§63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

§63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

§63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

§63.6620 What performance tests and other procedures must I use?

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.

(1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

(3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in this subpart.

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

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (Eq.\ 1)$$

Where:

C_i = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

C_o = concentration of CO, THC, or formaldehyde at the control device outlet, and

R = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO_2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO_2 concentration is measured in lieu of oxygen concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

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

$$F_o = \frac{0.209\ F_d}{F_c} \quad (Eq.\ 2)$$

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

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

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

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/106 Btu)

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2, as follows:

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

Where:

X_{CO2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2—15 percent O_2, the defined O_2 correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO2}}{\%CO_2} \quad (Eq. 4)$$

Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O_2.

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

X_{CO2} = CO_2 correction factor, percent.

%CO_2 = Measured CO_2 concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

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

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.,* operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.,* wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010; 78 FR 6702, Jan. 30, 2013]

§63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O_2 or CO_2 according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR

part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2 concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (*e.g.,* thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;

(4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;

(5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.

(7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet §63.6603(c) do not have to meet the requirements of this paragraph (g).

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6703, Jan. 30, 2013]

§63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

(e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least three test runs.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

[69 FR 33506, June 15, 2004, as amended at 78 FR 6704, Jan. 30, 2013]

Continuous Compliance Requirements

§63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

§63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the

engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6704, Jan. 30, 2013]

Notifications, Reports, and Records

§63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in §63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in §63.6603(d) and identifying the state or local regulation that the engine is subject to.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6705, Jan. 30, 2013]

§63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

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

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

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

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

(iii) Engine site rating and model year.

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

(v) Hours operated for the purposes specified in §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §63.13.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010; 78 FR 6705, Jan. 30, 2013]

§63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) through (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in §63.6640(f)(2)(ii) or (iii) or §63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 78 FR 6706, Jan. 30, 2013]

§63.6660 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

Other Requirements and Information

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

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a

site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

§63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

§63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

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

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

Backup power for renewable energy means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see §63.14).

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.,* as amended by Public Law 101-549, 104 Stat. 2399).

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

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

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (*e.g.* biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO_2.

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

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

(2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §63.6640(f).

(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §63.6640(f)(2)(ii) or (iii) and §63.6640(f)(4)(i) or (ii).

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes “rich” glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The “lean” glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

Institutional emergency stationary RICE means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO_2.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_X) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_X, CO, and volatile organic compounds (VOC) into CO_2, nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (*i.e.,* remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8.

Remote stationary RICE means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this paragraph (2), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_X (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

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

Stationary reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011; 78 FR 6706, Jan. 30, 2013]

Table 1a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2	

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2 and using NSCR;	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.[1]
2. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2 and not using NSCR.	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6706, Jan. 30, 2013]

Table 2a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O_2. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O_2 until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O_2	

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O_2	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

Table 2b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP

As stated in §§63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; and existing CI stationary RICE >500 HP:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst.	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and
	b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and	Comply with any operating limitations approved by the Administrator.
New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and	

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst.	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6707, Jan. 30, 2013]

Table 2c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency stationary CI RICE and black start stationary CI RICE[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first.[2] 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]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[3]
2. Non-Emergency, non-black start stationary CI RICE <100 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first.[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O_2.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
5. Non-Emergency, non-black start stationary CI RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O_2; or 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 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]	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O_2.	
10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O_2.	
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O_2.	
12. Non-emergency, non-black start stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O_2.	

[1]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[2]Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2c of this subpart.

[3]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[78 FR 6708, Jan. 30, 2013, as amended at 78 FR 14457, Mar. 6, 2013]

Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI stationary RICE ≤300 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[1] 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 O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]; b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
9. Non-emergency, non-black start 4SLB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install an oxidation catalyst to reduce HAP emissions from the stationary RICE.	
10. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
11. Non-emergency, non-black start 4SRB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
12. Non-emergency, non-black start 4SRB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install NSCR to reduce HAP emissions from the stationary RICE.	
13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1] b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

[1]Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

[2]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[78 FR 6709, Jan. 30, 2013]

Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests

As stated in §§63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

For each . . .	Complying with the requirement to . . .	You must . . .
1. New or reconstructed 2SLB stationary RICE >500 HP located at major sources; new or reconstructed 4SLB stationary RICE ≥250 HP located at major sources; and new or reconstructed CI stationary RICE >500 HP located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually.[1]
2. 4SRB stationary RICE ≥5,000 HP located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually.[1]
3. Stationary RICE >500 HP located at major sources and new or reconstructed 4SLB stationary RICE 250≤HP≤500 located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually.[1]
4. Existing non-emergency, non-black start CI stationary RICE >500 HP that are not limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE >500 HP that are limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 5 years, whichever comes first.

[1]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[78 FR 6711, Jan. 30, 2013]

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

As stated in §§63.6610, 63.6611, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. reduce CO emissions	i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For CO and O_2 measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Measure the O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[ac] (heated probe not necessary)	(b) Measurements to determine O_2 must be made at the same time as the measurements for CO concentration.
		iii. Measure the CO at the inlet and the outlet of the control device	(1) ASTM D6522-00 (Reapproved 2005)[abc] (heated probe not necessary) or Method 10 of 40 CFR part 60, appendix A-4	(c) The CO concentration must be at 15 percent O_2, dry basis.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
2. 4SRB stationary RICE	a. reduce formaldehyde emissions	i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For formaldehyde, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A.
		ii. Measure O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[a] (heated probe not necessary)	(a) Measurements to determine O_2 concentration must be made at the same time as the measurements for formaldehyde or THC concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03[a]	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration.
		iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formalde-hyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03[a], provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device	(1) Method 25A, reported as propane, of 40 CFR part 60, appendix A-7	(a) THC concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
3. Stationary RICE	a. limit the concentra-tion of formalde-hyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary RICE; and		(a) For formaldehyde, CO, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A. If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[a] (heated probe not necessary)	(a) Measurements to determine O_2 concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iii. Measure moisture content of the station-ary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03[a]	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iv. Measure formalde-hyde at the exhaust of the station-ary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03[a], provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. measure CO at the exhaust of the station-ary RICE	(1) Method 10 of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (2005)[ac], Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03[a]	(a) CO concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

[a]You may also use Methods 3A and 10 as options to ASTM-D6522-00 (2005). You may obtain a copy of ASTM-D6522-00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[b]You may obtain a copy of ASTM-D6348-03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[79 FR 11290, Feb. 27, 2014]

Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations, Operating Limitations, and Other Requirements

As stated in §§63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2 or CO_2 at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2 or CO_2 at the outlet of the oxidation catalyst according to the requirements in §63.6625(a); and
		ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average concentration of CO calculated using §63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
9. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
11. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Reduce CO emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.
13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O_2;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F.
14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O_2, or the average reduction of emissions of THC is 30 percent or more;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F.

[78 FR 6712, Jan. 30, 2013]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements

As stated in §63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and 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, and existing non-emergency stationary CI RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS	i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to §63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and
		iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved, or to demonstrate that the average reduction of emissions of THC determined from the performance test is equal to or greater than 30 percent.[a]
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and 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 rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency stationary SI RICE located at an area source of HAP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year, and existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are remote stationary RICE	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
12. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
13. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O_2; and either ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F.
15. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O_2, or the average reduction of emissions of THC is 30 percent or more; and either ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F.

[a]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[78 FR 6715, Jan. 30, 2013]

Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

As stated in §63.6650, you must comply with the following requirements for reports:

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Existing non-emergency, non-black start stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or	i. Semiannually according to the requirements in §63.6650(b)(1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in §63.6650(b)(6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations.
		b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or	i. Semiannually according to the requirements in §63.6650(b).
		c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4).	i. Semiannually according to the requirements in §63.6650(b).
2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	i. Annually, according to the requirements in §63.6650.
		b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 2.a.i.
		c. Any problems or errors suspected with the meters.	i. See item 2.a.i.
3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Compliance report	a. The results of the annual compliance demonstration, if conducted during the reporting period.	i. Semiannually according to the requirements in §63.6650(b)(1)-(5).

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
4. Emergency stationary RICE that operate or are contractually obligated to be available for more than 15 hours per year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operate for the purposes specified in §63.6640(f)(4)(ii)	Report	a. The information in §63.6650(h)(1)	i. annually according to the requirements in §63.6650(h)(2)-(3).

[78 FR 6719, Jan. 30, 2013]

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.

As stated in §63.6665, you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions	Yes.	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes.	
§63.4	Prohibited activities and circumvention	Yes.	
§63.5	Construction and reconstruction	Yes.	
§63.6(a)	Applicability	Yes.	
§63.6(b)(1)-(4)	Compliance dates for new and reconstructed sources	Yes.	
§63.6(b)(5)	Notification	Yes.	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§63.6(c)(1)-(2)	Compliance dates for existing sources	Yes.	
§63.6(c)(3)-(4)	[Reserved]		
§63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§63.6(d)	[Reserved]		
§63.6(e)	Operation and maintenance	No.	
§63.6(f)(1)	Applicability of standards	No.	
§63.6(f)(2)	Methods for determining compliance	Yes.	
§63.6(f)(3)	Finding of compliance	Yes.	
§63.6(g)(1)-(3)	Use of alternate standard	Yes.	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.6(j)	Presidential compliance exemption	Yes.	
§63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.
§63.7(a)(3)	CAA section 114 authority	Yes.	
§63.7(b)(1)	Notification of performance test	Yes	Except that §63.7(b)(1) only applies as specified in §63.6645.
§63.7(b)(2)	Notification of rescheduling	Yes	Except that §63.7(b)(2) only applies as specified in §63.6645.
§63.7(c)	Quality assurance/test plan	Yes	Except that §63.7(c) only applies as specified in §63.6645.
§63.7(d)	Testing facilities	Yes.	
§63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.
§63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes.	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§63.7(f)	Alternative test method provisions	Yes.	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§63.7(h)	Waiver of tests	Yes.	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes.	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No.	
§63.8(b)(1)	Monitoring	Yes.	
§63.8(b)(2)-(3)	Multiple effluents and multiple monitoring systems	Yes.	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§63.8(c)(1)(i)	Routine and predictable SSM	No	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No	
§63.8(c)(2)-(3)	Monitoring system installation	Yes.	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)-(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.8(d)	CMS quality control	Yes.	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.
		Except that §63.8(e) only applies as specified in §63.6645.	
§63.8(f)(1)-(5)	Alternative monitoring method	Yes	Except that §63.8(f)(4) only applies as specified in §63.6645.
§63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that §63.8(f)(6) only applies as specified in §63.6645.
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§63.9(b)(1)-(5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.
		Except that §63.9(b) only applies as specified in §63.6645.	
§63.9(c)	Request for compliance extension	Yes	Except that §63.9(c) only applies as specified in §63.6645.
§63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that §63.9(d) only applies as specified in §63.6645.
§63.9(e)	Notification of performance test	Yes	Except that §63.9(e) only applies as specified in §63.6645.
§63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	Except that §63.9(g) only applies as specified in §63.6645.
§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that §63.9(g) only applies as specified in §63.6645.	
§63.9(h)(1)-(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
			Except that §63.9(h) only applies as specified in §63.6645.
§63.9(i)	Adjustment of submittal deadlines	Yes.	
§63.9(j)	Change in previous information	Yes.	
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.10(b)(1)	Record retention	Yes	Except that the most recent 2 years of data do not have to be retained on site.
§63.10(b)(2)(i)-(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)-(xi)	Records	Yes.	
§63.10(b)(2)(xii)	Record when under waiver	Yes.	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§63.10(b)(3)	Records of applicability determination	Yes.	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)-(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes.	
§63.10(d)(2)	Report of performance test results	Yes.	
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that §63.10(e)(3)(i) (C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010, as amended at 78 FR 6720, Jan. 30, 2013]

Appendix A—Protocol for Using an Electrochemical Analyzer to Determine Oxygen and Carbon Monoxide Concentrations From Certain Engines

1.0 Scope and Application. What is this Protocol?

This protocol is a procedure for using portable electrochemical (EC) cells for measuring carbon monoxide (CO) and oxygen (O_2) concentrations in controlled and uncontrolled emissions from existing stationary 4-stroke lean burn and 4-stroke rich burn reciprocating internal combustion engines as specified in the applicable rule.

1.1 Analytes. What does this protocol determine?

This protocol measures the engine exhaust gas concentrations of carbon monoxide (CO) and oxygen (O_2).

Analyte	CAS No.	Sensitivity
Carbon monoxide (CO)	630-08-0	Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.
Oxygen (O_2)	*7782-44-7*	

1.2 Applicability. When is this protocol acceptable?

This protocol is applicable to 40 CFR part 63, subpart ZZZZ. Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

1.3 Data Quality Objectives. How good must my collected data be?

Refer to Section 13 to verify and document acceptable analyzer performance.

1.4 Range. What is the targeted analytical range for this protocol?

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and O_2, or no more than twice the permitted CO level.

1.5 Sensitivity. What minimum detectable limit will this protocol yield for a particular gas component?

The minimum detectable limit depends on the nominal range and resolution of the specific EC cell used, and the signal to noise ratio of the measurement system. The minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.

2.0 Summary of Protocol

In this protocol, a gas sample is extracted from an engine exhaust system and then conveyed to a portable EC analyzer for measurement of CO and O_2 gas concentrations. This method provides measurement system performance specifications and sampling protocols to ensure reliable data. You may use additions to, or modifications of vendor supplied measurement systems (e.g., heated or unheated sample lines, thermocouples, flow meters, selective gas scrubbers, etc.) to meet the design specifications of this protocol. Do not make changes to the measurement system from the as-verified configuration (Section 3.12).

3.0 Definitions

3.1 Measurement System. The total equipment required for the measurement of CO and O_2 concentrations. The measurement system consists of the following major subsystems:

3.1.1 Data Recorder. A strip chart recorder, computer or digital recorder for logging measurement data from the analyzer output. You may record measurement data from the digital data display manually or electronically.

3.1.2 Electrochemical (EC) Cell. A device, similar to a fuel cell, used to sense the presence of a specific analyte and generate an electrical current output proportional to the analyte concentration.

3.1.3 Interference Gas Scrubber. A device used to remove or neutralize chemical compounds that may interfere with the selective operation of an EC cell.

3.1.4 Moisture Removal System. Any device used to reduce the concentration of moisture in the sample stream so as to protect the EC cells from the damaging effects of condensation and to minimize errors in measurements caused by the scrubbing of soluble gases.

3.1.5 Sample Interface. The portion of the system used for one or more of the following: sample acquisition; sample transport; sample conditioning or protection of the EC cell from any degrading effects of the engine exhaust effluent; removal of particulate matter and condensed moisture.

3.2 Nominal Range. The range of analyte concentrations over which each EC cell is operated (normally 25 percent to 150 percent of up-scale calibration gas value). Several nominal ranges can be used for any given cell so long as the calibration and repeatability checks for that range remain within specifications.

3.3 Calibration Gas. A vendor certified concentration of a specific analyte in an appropriate balance gas.

3.4 Zero Calibration Error. The analyte concentration output exhibited by the EC cell in response to zero-level calibration gas.

3.5 Up-Scale Calibration Error. The mean of the difference between the analyte concentration exhibited by the EC cell and the certified concentration of the up-scale calibration gas.

3.6 Interference Check. A procedure for quantifying analytical interference from components in the engine exhaust gas other than the targeted analytes.

3.7 Repeatability Check. A protocol for demonstrating that an EC cell operated over a given nominal analyte concentration range provides a stable and consistent response and is not significantly affected by repeated exposure to that gas.

3.8 Sample Flow Rate. The flow rate of the gas sample as it passes through the EC cell. In some situations, EC cells can experience drift with changes in flow rate. The flow rate must be monitored and documented during all phases of a sampling run.

3.9 Sampling Run. A timed three-phase event whereby an EC cell's response rises and plateaus in a sample conditioning phase, remains relatively constant during a measurement data phase, then declines during a refresh phase. The sample conditioning phase exposes the EC cell to the gas sample for a length of time sufficient to reach a constant response. The measurement data phase is the time interval during which gas sample measurements can be made that meet the acceptance criteria of this protocol. The refresh phase then purges the EC cells with CO-free air. The refresh phase replenishes requisite O_2 and moisture in the electrolyte reserve and provides a mechanism to de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre- sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

3.10 Sampling Day. A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check. The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

3.12 Performance-Established Configuration. The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

4.0 Interferences.

When present in sufficient concentrations, NO and NO_2 are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

5.0 Safety. [Reserved]

6.0 Equipment and Supplies.

6.1 What equipment do I need for the measurement system?

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

6.2 Measurement System Components.

6.2.1 Sample Probe. A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

6.2.2 Sample Line. Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

6.2.3 Calibration Assembly (optional). A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

6.2.4 Particulate Filter (optional). Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

6.2.5 Sample Pump. A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.8 Sample Flow Rate Monitoring. An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

6.2.9 Sample Gas Manifold (optional). A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.10 EC cell. A device containing one or more EC cells to determine the CO and O_2 concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

6.2.11 Data Recorder. A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for O_2; and one degree (either °C or °F) for temperature. Alternatively, you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.

6.2.12 Interference Gas Filter or Scrubber. A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

7.0 Reagents and Standards. What calibration gases are needed?

7.1 Calibration Gases. CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and O_2. Use CO calibration gases with labeled concentration values certified by the manufacturer to be within ±5 percent of the label value. Dry ambient air (20.9 percent O_2) is acceptable for calibration of the O_2 cell. If needed, any lower percentage O_2 calibration gas must be a mixture of O_2 in nitrogen.

7.1.1 Up-Scale CO Calibration Gas Concentration. Choose one or more up-scale gas concentrations such that the average of the stack gas measurements for each stack gas sampling run are between 25 and 150 percent of those concentrations. Alternatively, choose an up-scale gas that does not exceed twice the concentration of the applicable outlet standard. If a measured gas value exceeds 150 percent of the up-scale CO calibration gas value at any time during the stack gas sampling run, the run must be discarded and repeated.

7.1.2 Up-Scale O_2 Calibration Gas Concentration.

Select an O_2 gas concentration such that the difference between the gas concentration and the average stack gas measurement or reading for each sample run is less than 15 percent O_2. When the average exhaust gas O_2 readings are above 6 percent, you may use dry ambient air (20.9 percent O_2) for the up-scale O_2 calibration gas.

7.1.3 Zero Gas. Use an inert gas that contains less than 0.25 percent of the up-scale CO calibration gas concentration. You may use dry air that is free from ambient CO and other combustion gas products (e.g., CO_2).

8.0 Sample Collection and Analysis

8.1 Selection of Sampling Sites.

8.1.1 Control Device Inlet. Select a sampling site sufficiently downstream of the engine so that the combustion gases should be well mixed. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.1.2 Exhaust Gas Outlet. Select a sampling site located at least two stack diameters downstream of any disturbance (e.g., turbocharger exhaust, crossover junction or recirculation take-off) and at least one-half stack diameter upstream of the gas discharge to the atmosphere. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.2 Stack Gas Collection and Analysis. Prior to the first stack gas sampling run, conduct that the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the “sample conditioning phase” once per minute until constant readings are obtained. Then begin the “measurement data phase” and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the “refresh phase” by introducing dry air, free from CO and other combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the “measurement data phase” readings to calculate the average stack gas CO and O_2 concentrations.

8.3 EC Cell Rate. Maintain the EC cell sample flow rate so that it does not vary by more than ±10 percent throughout the pre-sampling calibration, stack gas sampling and post-sampling calibration check. Alternatively, the EC cell sample flow rate can be maintained within a tolerance range that does not affect the gas concentration readings by more than ±3 percent, as instructed by the EC cell manufacturer.

9.0 Quality Control (Reserved)

10.0 Calibration and Standardization

10.1 Pre-Sampling Calibration. Conduct the following protocol once for each nominal range to be used on each EC cell before performing a stack gas sampling run on each field sampling day. Repeat the calibration if you replace an EC cell before completing all of the sampling runs. There is no prescribed order for calibration of the EC cells; however, each cell must complete the measurement data phase during calibration. Assemble the measurement system by following the manufacturer's recommended protocols including for preparing and preconditioning the EC cell. Assure the measurement system has no leaks and verify the gas scrubbing agent is not depleted. Use Figure 1 to record all data.

10.1.1 Zero Calibration. For both the O_2 and CO cells, introduce zero gas to the measurement system (e.g., at the calibration assembly) and record the concentration reading every minute until readings are constant for at least two consecutive minutes. Include the time and sample flow rate. Repeat the steps in this section at least once to verify the zero calibration for each component gas.

10.1.2 Zero Calibration Tolerance. For each zero gas introduction, the zero level output must be less than or equal to ±3 percent of the up-scale gas value or ±1 ppm, whichever is less restrictive, for the CO channel and less than or equal to ±0.3 percent O_2 for the O_2 channel.

10.1.3 Up-Scale Calibration. Individually introduce each calibration gas to the measurement system (e.g., at the calibration assembly) and record the start time. Record all EC cell output responses and the flow rate during this “sample conditioning phase” once per minute until readings are constant for at least two minutes. Then begin the “measurement data phase” and record readings every 15 seconds for a total of two minutes, or as otherwise required. Finally, perform the “refresh phase” by introducing dry air, free from CO and other combustion gases, until readings are constant for at least two consecutive minutes. Then repeat the steps in this section at least once to verify the calibration for each component gas. Introduce all gases to flow through the entire sample handling system (i.e., at the exit end of the sampling probe or the calibration assembly).

10.1.4 Up-Scale Calibration Error. The mean of the difference of the “measurement data phase” readings from the reported standard gas value must be less than or equal to ±5 percent or ±1 ppm for CO or ±0.5 percent O_2, whichever is less restrictive, respectively. The maximum allowable deviation from the mean measured value of any single “measurement data phase” reading must be less than or equal to ±2 percent or ±1 ppm for CO or ±0.5 percent O_2, whichever is less restrictive, respectively.

10.2 Post-Sampling Calibration Check. Conduct a stack gas post-sampling calibration check after the stack gas sampling run or set of runs and within 12 hours of the initial calibration. Conduct up-scale and zero calibration checks using the protocol in Section 10.1. Make no changes to the sampling system or EC cell calibration until all post-sampling calibration checks have been recorded. If either the zero or up-scale calibration error exceeds the respective specification in Sections 10.1.2 and 10.1.4 then all measurement data collected since the previous successful calibrations are invalid and re-calibration and re-sampling are required. If the sampling system is disassembled or the EC cell calibration is adjusted, repeat the calibration check before conducting the next analyzer sampling run.

11.0 Analytical Procedure

The analytical procedure is fully discussed in Section 8.

12.0 Calculations and Data Analysis

Determine the CO and O_2 concentrations for each stack gas sampling run by calculating the mean gas concentrations of the data recorded during the “measurement data phase”.

13.0 Protocol Performance

Use the following protocols to verify consistent analyzer performance during each field sampling day.

13.1 Measurement Data Phase Performance Check. Calculate the mean of the readings from the “measurement data phase”. The maximum allowable deviation from the mean for each of the individual readings is ±2 percent, or ±1 ppm,

whichever is less restrictive. Record the mean value and maximum deviation for each gas monitored. Data must conform to Section 10.1.4. The EC cell flow rate must conform to the specification in Section 8.3.

Example: A measurement data phase is invalid if the maximum deviation of any single reading comprising that mean is greater than ±2 percent *or* ±1 ppm (the default criteria). For example, if the mean = 30 ppm, single readings of below 29 ppm and above 31 ppm are disallowed).

13.2 Interference Check. Before the initial use of the EC cell and interference gas scrubber in the field, and semi-annually thereafter, challenge the interference gas scrubber with NO and NO_2 gas standards that are generally recognized as representative of diesel-fueled engine NO and NO_2 emission values. Record the responses displayed by the CO EC cell and other pertinent data on Figure 1 or a similar form.

13.2.1 Interference Response. The combined NO and NO_2 interference response should be less than or equal to ±5 percent of the up-scale CO calibration gas concentration.

13.3 Repeatability Check. Conduct the following check once for each nominal range that is to be used on the CO EC cell within 5 days prior to each field sampling program. If a field sampling program lasts longer than 5 days, repeat this check every 5 days. Immediately repeat the check if the EC cell is replaced or if the EC cell is exposed to gas concentrations greater than 150 percent of the highest up-scale gas concentration.

13.3.1 Repeatability Check Procedure. Perform a complete EC cell sampling run (all three phases) by introducing the CO calibration gas to the measurement system and record the response. Follow Section 10.1.3. Use Figure 1 to record all data. Repeat the run three times for a total of four complete runs. During the four repeatability check runs, do not adjust the system except where necessary to achieve the correct calibration gas flow rate at the analyzer.

13.3.2 Repeatability Check Calculations. Determine the highest and lowest average “measurement data phase” CO concentrations from the four repeatability check runs and record the results on Figure 1 or a similar form. The absolute value of the difference between the maximum and minimum average values recorded must not vary more than ±3 percent or ±1 ppm of the up-scale gas value, whichever is less restrictive.

14.0 Pollution Prevention (Reserved)

15.0 Waste Management (Reserved)

16.0 Alternative Procedures (Reserved)

17.0 References

(1) “Development of an Electrochemical Cell Emission Analyzer Test Protocol”, Topical Report, Phil Juneau, Emission Monitoring, Inc., July 1997.

(2) “Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers, and Process Heaters Using Portable Analyzers”, EMC Conditional Test Protocol 30 (CTM-30), Gas Research Institute Protocol GRI-96/0008, Revision 7, October 13, 1997.

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

(4) “Code of Federal Regulations”, Protection of Environment, 40 CFR, Part 60, Appendix A, Methods 1-4; 10.

Table 1: Appendix A—Sampling Run Data.

Facility_____ Engine I.D._____ Date_____											
Run Type:	(_)				(_)			(_)			(_)
(X)	Pre-Sample Calibration				Stack Gas Sample			Post-Sample Cal. Check			Repeatability Check
Run #	1	1	2	2	3	3	4	4	Time	Scrub. OK	Flow- Rate
Gas	O_2	CO	O_2	CO	O_2	CO	O_2	CO			
Sample Cond. Phase											
″											
″											
″											
″											
Measurement Data Phase											
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[78 FR 6721, Jan. 30, 2013]

Attachment G

Part 70 Operating Permit Renewal No: T089-36144-00203

[Downloaded from the eCFR on August 25, 2014]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

SOURCE: 73 FR 3591, Jan. 18, 2008, unless otherwise noted.

What This Subpart Covers

§60.4230 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (6) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary SI ICE with a maximum engine power less than or equal to 19 kilowatt (KW) (25 horsepower (HP)) that are manufactured on or after July 1, 2008.

(2) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline fueled or that are rich burn engines fueled by liquefied petroleum gas (LPG), where the date of manufacture is:

(i) On or after July 1, 2008; or

(ii) On or after January 1, 2009, for emergency engines.

(3) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are not gasoline fueled and are not rich burn engines fueled by LPG, where the manufacturer participates in the voluntary manufacturer certification program described in this subpart and where the date of manufacture is:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) On or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) On or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) On or after January 1, 2009, for emergency engines.

(4) Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).

(5) Owners and operators of stationary SI ICE that are modified or reconstructed after June 12, 2006, and any person that modifies or reconstructs any stationary SI ICE after June 12, 2006.

(6) The provisions of §60.4236 of this subpart are applicable to all owners and operators of stationary SI ICE that commence construction after June 12, 2006.

(b) The provisions of this subpart are not applicable to stationary SI ICE being tested at an engine test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(d) For the purposes of this subpart, stationary SI ICE using alcohol-based fuels are considered gasoline engines.

(e) Stationary SI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR parts 90 and 1048, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

(f) Owners and operators of facilities with internal combustion engines that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37972, June 28, 2011]

Emission Standards for Manufacturers

§60.4231 What emission standards must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing such engines?

(a) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008 to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as follows:

If engine displacement is * * *	and manufacturing dates are * * *	the engine must meet emission standards and related requirements for nonhandheld engines under * * *
(1) below 225 cc	July 1, 2008 to December 31, 2011	40 CFR part 90.
(2) below 225 cc	January 1, 2012 or later	40 CFR part 1054.
(3) at or above 225 cc	July 1, 2008 to December 31, 2010	40 CFR part 90.
(4) at or above 225 cc	January 1, 2011 or later	40 CFR part 1054.

(b) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that use gasoline and that are manufactured on or after the applicable date in

§60.4230(a)(2), or manufactured on or after the applicable date in §60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE with a maximum engine power greater than 25 HP and less than 130 HP that use gasoline and that are manufactured on or after the applicable date in §60.4230(a)(4) to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cubic centimeters (cc) that use gasoline to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate.

(c) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that are rich burn engines that use LPG and that are manufactured on or after the applicable date in §60.4230(a)(2), or manufactured on or after the applicable date in §60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE greater than 25 HP and less than 130 HP that are rich burn engines that use LPG and that are manufactured on or after the applicable date in §60.4230(a)(4) to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc that are rich burn engines that use LPG to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate.

(d) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) under the voluntary manufacturer certification program described in this subpart must certify those engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers who choose to certify their emergency stationary SI ICE greater than 25 HP and less than 130 HP (except gasoline and rich burn engines that use LPG), must certify those engines to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc (except gasoline and rich burn engines that use LPG) to the certification emission standards for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate. For stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) manufactured prior to January 1, 2011, manufacturers may choose to certify these engines to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP.

(e) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) under the voluntary manufacturer certification program described in this subpart must certify those engines to the emission standards in Table 1 to this subpart. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) that are lean burn engines that use LPG to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. For stationary SI ICE with a maximum engine power greater than or equal to 100 HP (75 KW) and less than 500 HP (373 KW) manufactured prior to January 1, 2011, and for stationary SI ICE with a maximum engine power greater than or equal to 500 HP (373 KW) manufactured prior to July 1, 2010, manufacturers may choose to certify these engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048 applicable to engines that are not severe duty engines.

(f) Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, to the extent they apply to equipment manufacturers.

(g) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary SI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this

section that are applicable to the model year, maximum engine power and displacement of the reconstructed stationary SI ICE.

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59175, Oct. 8, 2008; 76 FR 37973, June 28, 2011; 78 FR 6697, Jan. 30, 2013]

§60.4232 How long must my engines meet the emission standards if I am a manufacturer of stationary SI internal combustion engines?

Engines manufactured by stationary SI internal combustion engine manufacturers must meet the emission standards as required in §60.4231 during the certified emissions life of the engines.

Emission Standards for Owners and Operators

§60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?

(a) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008, must comply with the emission standards in §60.4231(a) for their stationary SI ICE.

(b) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in §60.4230(a)(4) that use gasoline must comply with the emission standards in §60.4231(b) for their stationary SI ICE.

(c) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in §60.4230(a)(4) that are rich burn engines that use LPG must comply with the emission standards in §60.4231(c) for their stationary SI ICE.

(d) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards for field testing in 40 CFR 1048.101(c) for their non-emergency stationary SI ICE and with the emission standards in Table 1 to this subpart for their emergency stationary SI ICE. Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) manufactured prior to January 1, 2011, that were certified to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP, may optionally choose to meet those standards.

(e) Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified.

(f) Owners and operators of any modified or reconstructed stationary SI ICE subject to this subpart must meet the requirements as specified in paragraphs (f)(1) through (5) of this section.

(1) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with emission standards in §60.4231(a) for their stationary SI ICE. Engines with a date of manufacture prior to July 1, 2008 must comply with the emission standards specified in §60.4231(a) applicable to engines manufactured on July 1, 2008.

(2) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline engines and are modified or reconstructed after June 12, 2006, must comply with the emission standards in §60.4231(b) for their stationary SI ICE. Engines with a date of manufacture prior to July 1, 2008 (or January 1, 2009

for emergency engines) must comply with the emission standards specified in §60.4231(b) applicable to engines manufactured on July 1, 2008 (or January 1, 2009 for emergency engines).

(3) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are rich burn engines that use LPG, that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in §60.4231(c). Engines with a date of manufacture prior to July 1, 2008 (or January 1, 2009 for emergency engines) must comply with the emission standards specified in §60.4231(c) applicable to engines manufactured on July 1, 2008 (or January 1, 2009 for emergency engines).

(4) Owners and operators of stationary SI natural gas and lean burn LPG engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (d) or (e) of this section, except that such owners and operators of non-emergency engines and emergency engines greater than or equal to 130 HP must meet a nitrogen oxides (NO_X) emission standard of 3.0 grams per HP-hour (g/HP-hr), a CO emission standard of 4.0 g/HP-hr (5.0 g/HP-hr for non-emergency engines less than 100 HP), and a volatile organic compounds (VOC) emission standard of 1.0 g/HP-hr, or a NO_X emission standard of 250 ppmvd at 15 percent oxygen (O_2), a CO emission standard 540 ppmvd at 15 percent O_2 (675 ppmvd at 15 percent O_2 for non-emergency engines less than 100 HP), and a VOC emission standard of 86 ppmvd at 15 percent O_2, where the date of manufacture of the engine is:

(i) Prior to July 1, 2007, for non-emergency engines with a maximum engine power greater than or equal to 500 HP (except lean burn natural gas engines and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) Prior to July 1, 2008, for non-emergency engines with a maximum engine power less than 500 HP;

(iii) Prior to January 1, 2009, for emergency engines;

(iv) Prior to January 1, 2008, for non-emergency lean burn natural gas engines and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP.

(5) Owners and operators of stationary SI landfill/digester gas ICE engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (e) of this section for stationary landfill/digester gas engines. Engines with maximum engine power less than 500 HP and a date of manufacture prior to July 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE with a maximum engine power less than 500 HP manufactured on July 1, 2008. Engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines greater than or equal to 500 HP and less than 1,350 HP) and a date of manufacture prior to July 1, 2007 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE with a maximum engine power greater than or equal to 500 HP (except lean burn engines greater than or equal to 500 HP and less than 1,350 HP) manufactured on July 1, 2007. Lean burn engines greater than or equal to 500 HP and less than 1,350 HP with a date of manufacture prior to January 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE that are lean burn engines greater than or equal to 500 HP and less than 1,350 HP and manufactured on January 1, 2008.

(g) Owners and operators of stationary SI wellhead gas ICE engines may petition the Administrator for approval on a case-by-case basis to meet emission standards no less stringent than the emission standards that apply to stationary emergency SI engines greater than 25 HP and less than 130 HP due to the presence of high sulfur levels in the fuel, as specified in Table 1 to this subpart. The request must, at a minimum, demonstrate that the fuel has high sulfur levels that prevent the use of aftertreatment controls and also that the owner has reasonably made all attempts possible to obtain an engine that will meet the standards without the use of aftertreatment controls. The petition must request the most stringent standards reasonably applicable to the engine using the fuel.

(h) Owners and operators of stationary SI ICE that are required to meet standards that reference 40 CFR 1048.101 must, if testing their engines in use, meet the standards in that section applicable to field testing, except as indicated in paragraph (e) of this section.

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37973, June 28, 2011]

§60.4234 How long must I meet the emission standards if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine.

Other Requirements for Owners and Operators

§60.4235 What fuel requirements must I meet if I am an owner or operator of a stationary SI gasoline fired internal combustion engine subject to this subpart?

Owners and operators of stationary SI ICE subject to this subpart that use gasoline must use gasoline that meets the per gallon sulfur limit in 40 CFR 80.195.

§60.4236 What is the deadline for importing or installing stationary SI ICE produced in previous model years?

(a) After July 1, 2010, owners and operators may not install stationary SI ICE with a maximum engine power of less than 500 HP that do not meet the applicable requirements in §60.4233.

(b) After July 1, 2009, owners and operators may not install stationary SI ICE with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in §60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in §60.4233 may not be installed after January 1, 2010.

(c) For emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP), owners and operators may not install engines that do not meet the applicable requirements in §60.4233 after January 1, 2011.

(d) In addition to the requirements specified in §§60.4231 and 60.4233, it is prohibited to import stationary SI ICE less than or equal to 19 KW (25 HP), stationary rich burn LPG SI ICE, and stationary gasoline SI ICE that do not meet the applicable requirements specified in paragraphs (a), (b), and (c) of this section, after the date specified in paragraph (a), (b), and (c) of this section.

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

§60.4237 What are the monitoring requirements if I am an owner or operator of an emergency stationary SI internal combustion engine?

(a) Starting on July 1, 2010, if the emergency stationary SI internal combustion engine that is greater than or equal to 500 HP that was built on or after July 1, 2010, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(b) Starting on January 1, 2011, if the emergency stationary SI internal combustion engine that is greater than or equal to 130 HP and less than 500 HP that was built on or after January 1, 2011, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(c) If you are an owner or operator of an emergency stationary SI internal combustion engine that is less than 130 HP, was built on or after July 1, 2008, and does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter upon startup of your emergency engine.

Compliance Requirements for Manufacturers

§60.4238 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines ≤19 KW (25 HP) or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(a) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

§60.4239 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that use gasoline or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(b) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of stationary SI emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

§60.4240 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that are rich burn engines that use LPG or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(c) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of stationary SI emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

§60.4241 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines participating in the voluntary certification program or a manufacturer of equipment containing such engines?

(a) Manufacturers of stationary SI internal combustion engines with a maximum engine power greater than 19 KW (25 HP) that do not use gasoline and are not rich burn engines that use LPG can choose to certify their engines to the emission standards in §60.4231(d) or (e), as applicable, under the voluntary certification program described in this

subpart. Manufacturers who certify their engines under the voluntary certification program must meet the requirements as specified in paragraphs (b) through (g) of this section. In addition, manufacturers of stationary SI internal combustion engines who choose to certify their engines under the voluntary certification program, must also meet the requirements as specified in §60.4247.

(b) Manufacturers of engines other than those certified to standards in 40 CFR part 90 or 40 CFR part 1054 must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must follow the same test procedures that apply to large SI nonroad engines under 40 CFR part 1048, but must use the D-1 cycle of International Organization of Standardization 8178-4: 1996(E) (incorporated by reference, see 40 CFR 60.17) or the test cycle requirements specified in Table 3 to 40 CFR 1048.505, except that Table 3 of 40 CFR 1048.505 applies to high load engines only. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

(c) Certification of stationary SI ICE to the emission standards specified in §60.4231(d) or (e), as applicable, is voluntary, but manufacturers who decide to certify are subject to all of the requirements indicated in this subpart with regard to the engines included in their certification. Manufacturers must clearly label their stationary SI engines as certified or non-certified engines.

(d) Manufacturers of natural gas fired stationary SI ICE who conduct voluntary certification of stationary SI ICE to the emission standards specified in §60.4231(d) or (e), as applicable, must certify their engines for operation using fuel that meets the definition of pipeline-quality natural gas. The fuel used for certifying stationary SI natural gas engines must meet the definition of pipeline-quality natural gas as described in §60.4248. In addition, the manufacturer must provide information to the owner and operator of the certified stationary SI engine including the specifications of the pipeline-quality natural gas to which the engine is certified and what adjustments the owner or operator must make to the engine when installed in the field to ensure compliance with the emission standards.

(e) Manufacturers of stationary SI ICE that are lean burn engines fueled by LPG who conduct voluntary certification of stationary SI ICE to the emission standards specified in §60.4231(d) or (e), as applicable, must certify their engines for operation using fuel that meets the specifications in 40 CFR 1065.720.

(f) Manufacturers may certify their engines for operation using gaseous fuels in addition to pipeline-quality natural gas; however, the manufacturer must specify the properties of that fuel and provide testing information showing that the engine will meet the emission standards specified in §60.4231(d) or (e), as applicable, when operating on that fuel. The manufacturer must also provide instructions for configuring the stationary engine to meet the emission standards on fuels that do not meet the pipeline-quality natural gas definition. The manufacturer must also provide information to the owner and operator of the certified stationary SI engine regarding the configuration that is most conducive to reduced emissions where the engine will be operated on gaseous fuels with different quality than the fuel that it was certified to.

(g) A stationary SI engine manufacturer may certify an engine family solely to the standards applicable to landfill/digester gas engines as specified in §60.4231(d) or (e), as applicable, but must certify their engines for operation using landfill/digester gas and must add a permanent label stating that the engine is for use only in landfill/digester gas applications. The label must be added according to the labeling requirements specified in 40 CFR 1048.135(b).

(h) For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

(i) For engines being certified to the voluntary certification standards in Table 1 of this subpart, the VOC measurement shall be made by following the procedures in 40 CFR 1065.260 and 1065.265 in order to determine the total NMHC emissions by using a flame-ionization detector and non-methane cutter. As an alternative to the

nonmethane cutter, manufacturers may use a gas chromatograph as allowed under 40 CFR 1065.267 and may measure ethane, as well as methane, for excluding such levels from the total VOC measurement.

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59176, Oct. 8, 2008; 76 FR 37974, June 28, 2011]

§60.4242 What other requirements must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing stationary SI internal combustion engines or a manufacturer of equipment containing such engines?

(a) Stationary SI internal combustion engine manufacturers must meet the provisions of 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054, as applicable, as well as 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1048 or 1054, except that engines certified pursuant to the voluntary certification procedures in §60.4241 are subject only to the provisions indicated in §60.4247 and are permitted to provide instructions to owners and operators allowing for deviations from certified configurations, if such deviations are consistent with the provisions of paragraphs §60.4241(c) through (f). Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, as applicable. Labels on engines certified to 40 CFR part 1048 must refer to stationary engines, rather than or in addition to nonroad engines, as appropriate.

(b) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054 for that model year may certify any such family that contains both nonroad and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts. This provision also applies to equipment or component manufacturers certifying to standards under 40 CFR part 1060.

(c) Manufacturers of engine families certified to 40 CFR part 1048 may meet the labeling requirements referred to in paragraph (a) of this section for stationary SI ICE by either adding a separate label containing the information required in paragraph (a) of this section or by adding the words “and stationary” after the word “nonroad” to the label.

(d) For all engines manufactured on or after January 1, 2011, and for all engines with a maximum engine power greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, a stationary SI engine manufacturer that certifies an engine family solely to the standards applicable to emergency engines must add a permanent label stating that the engines in that family are for emergency use only. The label must be added according to the labeling requirements specified in 40 CFR 1048.135(b).

(e) All stationary SI engines subject to mandatory certification that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230. Stationary SI engines subject to standards in 40 CFR part 90 may use the provisions in 40 CFR 90.909. Manufacturers of stationary engines with a maximum engine power greater than 25 HP that are not certified to standards and other requirements under 40 CFR part 1048 are subject to the labeling provisions of 40 CFR 1048.20 pertaining to excluded stationary engines.

(f) For manufacturers of gaseous-fueled stationary engines required to meet the warranty provisions in 40 CFR 90.1103 or 1054.120, we may establish an hour-based warranty period equal to at least the certified emissions life of the engines (in engine operating hours) if we determine that these engines are likely to operate for a number of hours greater than the applicable useful life within 24 months. We will not approve an alternate warranty under this paragraph (f) for nonroad engines. An alternate warranty period approved under this paragraph (f) will be the specified number of engine operating hours or two years, whichever comes first. The engine manufacturer shall request this alternate warranty period in its application for certification or in an earlier submission. We may approve an alternate warranty period for an engine family subject to the following conditions:

(1) The engines must be equipped with non-resettable hour meters.

(2) The engines must be designed to operate for a number of hours substantially greater than the applicable certified emissions life.

(3) The emission-related warranty for the engines may not be shorter than any published warranty offered by the manufacturer without charge for the engines. Similarly, the emission-related warranty for any component shall not be shorter than any published warranty offered by the manufacturer without charge for that component.

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59177, Oct. 8, 2008]

Compliance Requirements for Owners and Operators

§60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?

(a) If you are an owner or operator of a stationary SI internal combustion engine that is manufactured after July 1, 2008, and must comply with the emission standards specified in §60.4233(a) through (c), you must comply by purchasing an engine certified to the emission standards in §60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. In addition, you must meet one of the requirements specified in (a)(1) and (2) of this section.

(1) If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance.

(2) If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must demonstrate compliance according to (a)(2)(i) through (iii) of this section, as appropriate.

(i) If you are an owner or operator of a stationary SI internal combustion engine less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions, but no performance testing is required if you are an owner or operator.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup to demonstrate compliance.

(iii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(b) If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section.

(1) Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in paragraph (a) of this section.

(2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(d) or (e) and according to the requirements specified in §60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.

(i) If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent

practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(c) If you are an owner or operator of a stationary SI internal combustion engine that must comply with the emission standards specified in §60.4233(f), you must demonstrate compliance according paragraph (b)(2)(i) or (ii) of this section, except that if you comply according to paragraph (b)(2)(i) of this section, you demonstrate that your non-certified engine complies with the emission standards specified in §60.4233(f).

(d) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (d)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (d)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (d)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (d)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (d)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (d)(2) of this section. Except as provided in paragraph (d)(3)(i) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]

(e) Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233.

(f) If you are an owner or operator of a stationary SI internal combustion engine that is less than or equal to 500 HP and you purchase a non-certified engine or you do not operate and maintain your certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing as indicated in this section, but you are not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(g) It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

(h) If you are an owner/operator of an stationary SI internal combustion engine with maximum engine power greater than or equal to 500 HP that is manufactured after July 1, 2007 and before July 1, 2008, and must comply with the emission standards specified in sections 60.4233(b) or (c), you must comply by one of the methods specified in paragraphs (h)(1) through (h)(4) of this section.

(1) Purchasing an engine certified according to 40 CFR part 1048. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(i) If you are an owner or operator of a modified or reconstructed stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(f), you must demonstrate compliance according to one of the methods specified in paragraphs (i)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in §60.4233(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in §60.4244. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37974, June 28, 2011; 78 FR 6697, Jan. 30, 2013]

Testing Requirements for Owners and Operators

§60.4244 What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to this subpart.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

(d) To determine compliance with the NO_X mass per unit output emission limitation, convert the concentration of NO_X in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 1)}$$

Where:

ER = Emission rate of NO_X in g/HP-hr.

C_d = Measured NO_X concentration in parts per million by volume (ppmv).

1.912×10^{-3} = Conversion constant for ppm NO_X to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

(e) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 2)}$$

Where:

ER = Emission rate of CO in g/HP-hr.

C_d = Measured CO concentration in ppmv.

1.164×10^{-3} = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(f) For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 3)}$$

Where:

ER = Emission rate of VOC in g/HP-hr.

C_d = VOC concentration measured as propane in ppmv.

1.833×10^{-3} = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(g) If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_{Mi}}{C_{Ai}} \qquad \text{(Eq. 4)}$$

Where:

RF_i = Response factor of compound i when measured with EPA Method 25A.

C_{Mi} = Measured concentration of compound i in ppmv as carbon.

C_{Ai} = True concentration of compound i in ppmv as carbon.

$$C_{imr} = RF_i \times C_{imw} \qquad \text{(Eq. 5)}$$

Where:

C_{icorr} = Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

C_{imeas} = Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{Peq} = 0.6098 \times C_{icorr} \qquad \text{(Eq. 6)}$$

Where:

C_{Peq} = Concentration of compound i in mg of propane equivalent per DSCM.

C_{Peq} = Concentration of compound i in mg of propane equivalent per DSCM.

Notification, Reports, and Records for Owners and Operators

§60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?

Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.

(a) Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.

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

(2) Maintenance conducted on the engine.

(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

(4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.

(b) For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

(c) Owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in §60.4231 must submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (c)(1) through (5) of this section.

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

(2) The address of the affected source;

(3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(4) Emission control equipment; and

(5) Fuel used.

(d) Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed.

(e) If you own or operate an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §60.4243(d)(2)(ii) and (iii) or that operates for the purposes specified in §60.4243(d)(3)(i), you must submit an annual report according to the requirements in paragraphs (e)(1) through (3) of this section.

(1) The report must contain the following information:

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

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

(iii) Engine site rating and model year.

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

(v) Hours operated for the purposes specified in §60.4243(d)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4243(d)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §60.4243(d)(2)(ii) and (iii).

(vii) Hours spent for operation for the purposes specified in §60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4243(d)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

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

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59177, Oct. 8, 2008; 78 FR 6697, Jan. 30, 2013]

General Provisions

§60.4246 What parts of the General Provisions apply to me?

Table 3 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

Mobile Source Provisions

§60.4247 What parts of the mobile source provisions apply to me if I am a manufacturer of stationary SI internal combustion engines or a manufacturer of equipment containing such engines?

(a) Manufacturers certifying to emission standards in 40 CFR part 90, including manufacturers certifying emergency engines below 130 HP, must meet the provisions of 40 CFR part 90. Manufacturers certifying to emission standards in 40 CFR part 1054 must meet the provisions of 40 CFR part 1054. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060 to the extent they apply to equipment manufacturers.

(b) Manufacturers required to certify to emission standards in 40 CFR part 1048 must meet the provisions of 40 CFR part 1048. Manufacturers certifying to emission standards in 40 CFR part 1048 pursuant to the voluntary certification program must meet the requirements in Table 4 to this subpart as well as the standards in 40 CFR 1048.101.

(c) For manufacturers of stationary SI internal combustion engines participating in the voluntary certification program and certifying engines to Table 1 to this subpart, Table 4 to this subpart shows which parts of the mobile source provisions in 40 CFR parts 1048, 1065, and 1068 apply to you. Compliance with the deterioration factor provisions under 40 CFR 1048.205(n) and 1048.240 will be required for engines built new on and after January 1, 2010. Prior to January 1, 2010, manufacturers of stationary internal combustion engines participating in the voluntary certification program have the option to develop their own deterioration factors based on an engineering analysis.

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59177, Oct. 8, 2008]

Definitions

§60.4248 What definitions apply to this subpart?

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

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) are given in 40 CFR 90.105, 40 CFR 1054.107, and 40 CFR 1060.101, as appropriate. The values for certified emissions life for stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) certified to 40 CFR part 1048 are given in 40 CFR 1048.101(g). The certified emissions life for stationary SI ICE with a maximum engine power greater than 75 KW (100 HP) certified under the voluntary manufacturer certification program of this subpart is 5,000 hours or 7 years, whichever comes first. You may request in your application for certification that we approve a shorter certified emissions life for an engine family. We may approve a shorter certified emissions life, in hours of engine operation but not in years, if we determine that these engines will rarely operate longer than the shorter certified emissions life. If engines identical to those in the engine family have already been produced and are in use, your demonstration must include documentation from such in-use engines. In other cases, your demonstration must include an engineering analysis of information equivalent to such in-use data, such as data from research engines or similar engine models that are already in production. Your demonstration must also include any overhaul interval that you recommend, any mechanical warranty that you offer for the engine or its components, and any relevant customer design specifications. Your demonstration may include any other relevant information. The certified emissions life value may not be shorter than any of the following:

(i) 1,000 hours of operation.

(ii) Your recommended overhaul interval.

(iii) Your mechanical warranty for the engine.

Certified stationary internal combustion engine means an engine that belongs to an engine family that has a certificate of conformity that complies with the emission standards and requirements in this part, or of 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054, as appropriate.

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

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

Date of manufacture means one of the following things:

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

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

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

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

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and carbon dioxide (CO_2).

Emergency stationary internal combustion engine means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in §60.4243(d) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in §60.4243(d), then it is not considered to be an emergency stationary ICE under this subpart.

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

(2) The stationary ICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §60.4243(d).

(3) The stationary ICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §60.4243(d)(2)(ii) or (iii) and §60.4243(d)(3)(i).

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

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

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

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

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

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and 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.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining or natural gas production.

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

Maximum engine power means maximum engine power as defined in 40 CFR 1048.801.

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

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

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

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

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

Pipeline-quality natural gas means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions, and which is provided by a supplier through a pipeline. Pipeline-quality natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1,100 British thermal units per standard cubic foot.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to June 12, 2006, with passive emission control technology for 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.

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

Spark ignition means relating to either: a gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically

natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

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

Stationary internal combustion engine test cell/stand means an engine test cell/stand, as defined in 40 CFR part 63, subpart PPPPP, that tests stationary ICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Subpart means 40 CFR part 60, subpart JJJJ.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

Volatile organic compounds means volatile organic compounds as defined in 40 CFR 51.100(s).

Voluntary certification program means an optional engine certification program that manufacturers of stationary SI internal combustion engines with a maximum engine power greater than 19 KW (25 HP) that do not use gasoline and are not rich burn engines that use LPG can choose to participate in to certify their engines to the emission standards in §60.4231(d) or (e), as applicable.

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59177, Oct. 8, 2008; 76 FR 37974, June 28, 2011; 78 FR 6698, Jan. 30, 2013]

Table 1 to Subpart JJJJ of Part 60—NOX, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines ≥100 HP (Except Gasoline and Rich Burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines >25 HP

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards[a]					
			g/HP-hr			ppmvd at 15% O_2		
			NO_X	CO	VOC[d]	NO_X	CO	VOC[d]
Non-Emergency SI Natural Gas[b] and Non-Emergency SI Lean Burn LPG[b]	100≤HP<500	7/1/2008	2.0	4.0	1.0	160	540	86
		1/1/2011	1.0	2.0	0.7	82	270	60
Non-Emergency SI Lean Burn Natural Gas and LPG	500≤HP<1,350	1/1/2008	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500≤HP<1,350)	HP≥500	7/1/2007	2.0	4.0	1.0	160	540	86
	HP≥500	7/1/2010	1.0	2.0	0.7	82	270	60
Landfill/Digester Gas (except lean burn 500≤HP<1,350)	HP<500	7/1/2008	3.0	5.0	1.0	220	610	80
		1/1/2011	2.0	5.0	1.0	150	610	80
	HP≥500	7/1/2007	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Landfill/Digester Gas Lean Burn	500≤HP<1,350	1/1/2008	3.0	5.0	1.0	220	610	80

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards[a]					
			g/HP-hr			ppmvd at 15% O_2		
			NO_X	CO	VOC[d]	NO_X	CO	VOC[d]
		7/1/2010	2.0	5.0	1.0	150	610	80
Emergency	25<HP<130	1/1/2009	[c]10	387	N/A	N/A	N/A	N/A
	HP≥130		2.0	4.0	1.0	160	540	86

[a]Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O_2.

[b]Owners and operators of new or reconstructed non-emergency lean burn SI stationary engines with a site rating of greater than or equal to 250 brake HP located at a major source that are meeting the requirements of 40 CFR part 63, subpart ZZZZ, Table 2a do not have to comply with the CO emission standards of Table 1 of this subpart.

[c]The emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NO_X + HC.

[d]For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

[76 FR 37975, June 28, 2011]

Table 2 to Subpart JJJJ of Part 60—Requirements for Performance Tests

As stated in §60.4244, you must comply with the following requirements for performance tests within 10 percent of 100 percent peak (or the highest achievable) load:

Table 2 to Subpart JJJJ of Part 60—Requirements for Performance Tests

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary SI internal combustion engine demonstrating compliance according to §60.4244.	a. limit the concentration of NO_X in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate.	(a) Alternatively, for NO_X, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, Appendix A, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, Appendix A.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B[b] of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005)[ae].	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for NO_X concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 2C of 40 CFR part 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7.	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM Method D 6348-03[e].	(c) Measurements to determine moisture must be made at the same time as the measurement for NO_X concentration.
		v. Measure NO_X at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device.	(5) Method 7E of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (Reapproved 2005)[ae], Method 320 of 40 CFR part 63, appendix A, or ASTM Method D 6348-03[e].	(d) Results of this test consist of the average of the three 1-hour or longer runs.
	b. limit the concentration of CO in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate.	(a) Alternatively, for CO, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, Appendix A, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, Appendix A.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B[b] of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005)[ae].	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for CO concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 2C of 40 CFR part 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7.	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM Method D 6348-03[e].	(c) Measurements to determine moisture must be made at the same time as the measurement for CO concentration.
		v. Measure CO at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device.	(5) Method 10 of 40 CFR part 60, appendix A4, ASTM Method D6522-00 (Reapproved 2005)[ae], Method 320 of 40 CFR part 63, appendix A, or ASTM Method D 6348-03[e].	(d) Results of this test consist of the average of the three 1-hour or longer runs.
	c. limit the concentration of VOC in the stationary SI internal combustion engine exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate.	(a) Alternatively, for VOC, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, Appendix A, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, Appendix A.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B[b] of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005)[ae].	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for VOC concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 2C of 40 CFR part 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7.	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM Method D 6348-03[e].	(c) Measurements to determine moisture must be made at the same time as the measurement for VOC concentration.
		v. Measure VOC at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device.	(5) Methods 25A and 18 of 40 CFR part 60, appendices A-6 and A-7, Method 25A with the use of a methane cutter as described in 40 CFR 1065.265, Method 18 of 40 CFR part 60, appendix A-6[cd], Method 320 of 40 CFR part 63, appendix A, or ASTM Method D 6348-03[e].	(d) Results of this test consist of the average of the three 1-hour or longer runs.

[a]Also, you may petition the Administrator for approval to use alternative methods for portable analyzer.

[b]You may use ASME PTC 19.10-1981, Flue and Exhaust Gas Analyses, for measuring the O_2 content of the exhaust gas as an alternative to EPA Method 3B. AMSE PTC 19.10-1981 incorporated by reference, see 40 CFR 60.17

[c]You may use EPA Method 18 of 40 CFR part 60, appendix A-6, provided that you conduct an adequate pre-survey test prior to the emissions test, such as the one described in OTM 11 on EPA's Web site (*http://www.epa.gov/ttn/emc/prelim/otm11.pdf*).

[d]You may use ASTM D6420-99 (2004), Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography/Mass Spectrometry as an alternative to EPA Method 18 for measuring total nonmethane organic. ASTM D6420-99(2004) incorporated by reference; see 40 CFR 60.17.

[e]Incorporated by reference; see 40 CFR 60.17.

[79 FR 11251, Feb. 27, 2014]

Table 3 to Subpart JJJJ of Part 60—Applicability of General Provisions to Subpart JJJJ

[As stated in §60.4246, you must comply with the following applicable General Provisions]

General provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4248.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4245.
§60.8	Performance tests	Yes	Except that §60.8 only applies to owners and operators who are subject to performance testing in subpart JJJJ.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	Yes	Requirements are specified in subpart JJJJ.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	No	
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

Table 4 to Subpart JJJJ of Part 60—Applicability of Mobile Source Provisions for Manufacturers Participating in the Voluntary Certification Program and Certifying Stationary SI ICE to Emission Standards in Table 1 of Subpart JJJJ

[As stated in §60.4247, you must comply with the following applicable mobile source provisions if you are a manufacturer participating in the voluntary certification program and certifying stationary SI ICE to emission standards in Table 1 of subpart JJJJ]

Mobile source provisions citation	Subject of citation	Applies to subpart	Explanation
1048 subpart A	Overview and Applicability	Yes	
1048 subpart B	Emission Standards and Related Requirements	Yes	Except for the specific sections below.
1048.101	Exhaust Emission Standards	No	
1048.105	Evaporative Emission Standards	No	
1048.110	Diagnosing Malfunctions	No	

Mobile source provisions citation	Subject of citation	Applies to subpart	Explanation
1048.140	Certifying Blue Sky Series Engines	No	
1048.145	Interim Provisions	No	
1048 subpart C	Certifying Engine Families	Yes	Except for the specific sections below.
1048.205(b)	AECD reporting	Yes	
1048.205(c)	OBD Requirements	No	
1048.205(n)	Deterioration Factors	Yes	Except as indicated in 60.4247(c).
1048.205(p)(1)	Deterioration Factor Discussion	Yes	
1048.205(p)(2)	Liquid Fuels as they require	No	
1048.240(b)(c)(d)	Deterioration Factors	Yes	
1048 subpart D	Testing Production-Line Engines	Yes	
1048 subpart E	Testing In-Use Engines	No	
1048 subpart F	Test Procedures	Yes	
1065.5(a)(4)	Raw sampling (refers reader back to the specific emissions regulation for guidance)	Yes	
1048 subpart G	Compliance Provisions	Yes	
1048 subpart H	Reserved		
1048 subpart I	Definitions and Other Reference Information	Yes	
1048 appendix I and II	Yes		
1065 (all subparts)	Engine Testing Procedures	Yes	Except for the specific section below.
1065.715	Test Fuel Specifications for Natural Gas	No	
1068 (all subparts)	General Compliance Provisions for Nonroad Programs	Yes	Except for the specific sections below.
1068.245	Hardship Provisions for Unusual Circumstances	No	
1068.250	Hardship Provisions for Small-Volume Manufacturers	No	
1068.255	Hardship Provisions for Equipment Manufacturers and Secondary Engine Manufacturers	No	

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Significant Source Modification and Part 70 Permit Renewal

Source Description and Location

Source Name:	Cargill, Inc.
Source Location:	1100 Indianapolis Blvd., Hammond, IN 46320
County:	Lake
SIC Code:	2046 (Wet Corn Milling)
Significant Source Modification No.:	089-36416-00203
Part 70 Renewal No.:	T089-36144-00203
Permit Reviewer:	Madhurima Moulik

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Cargill, Inc. relating to the operation of a stationary wet corn milling facility. On August 10, 2015, Cargill, Inc. submitted an application to the OAQ requesting to renew its operating permit. Cargill, Inc. was issued its first Part 70 Operating Permit Renewal No. T089-27009-00203 on June 13, 2011.

The Permittee also applied for approval to add two (2) corn silos and two (2) bucket elevators to the Grind and Feedhouse Area, one (1) diesel-fired emergency generator, two (2) gasoline-fired emergency generators and six (6) Torpedo heaters to the facility.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

I. Anaerobic Wastewater Treatment Process

(a) One (1) anaerobic wastewater treatment process installed in July 1995. Biogas is generated in the wastewater treatment plant by anaerobic reaction. The biogas can be controlled by:

(1) Diverted to a plant process burner for energy recovery, which is the normal scenario; or

(2) One (1) Biogas Flare (Unit ID 800-04-E), installed in July 1995. The biogas flare converts the hydrogen sulfide (H_2S) in the biogas to sulfur dioxide (SO_2). The biogas flare exhausts to stack ID S800-05-E.

(b) Two (2) wastewater treatment process centrifuges (WWTP - North and WWTP - South), installed in July 1995. The centrifuges dewater the excess biomass from wastewater treatment process. Exhaust from the process vents inside the WWTP building.

II. Alternate Carbohydrate Area

(c) Alternate Carbohydrate Mill Feed Hopper (Unit 127-30-B), installed in May 1993 and repurposed in 2008, with a maximum capacity of 0.836 tons per hour. Particulate emissions are controlled by dust collector (CE127-30-B) that exhausts to stack S127-30-B.

(d) No. 1 and No. 2 Alternate Carbohydrate Storage Bins (Unit ID 127-28-B and 127-29-B), installed in May 1993 and repurposed in 2008, each with a maximum throughput of 15 tons per hour. Carbohydrate is pneumatically conveyed to these hoppers equipped with bag filter dust collectors (CE127-28-B and CE127-29-B) that exhaust to stacks S127-28-B and S127-29-B.

(e) No. 1 and No. 2 Vacuum Cleaner Systems (Unit ID 127-21-B and 127-22-B), installed in May 1993, each with a maximum throughput of 0.3 tons per hour. These systems are for building dust. Particulate emissions are controlled by dust collectors that exhaust to stacks S127-21-B and S127-22-B.

III. Grind and Feedhouse Area

(f) Gluten Dryer System (Unit ID 121-01-G), installed in March 1995. Gluten meal is fed to a 12.5 MMBtu/hr natural and bio gas-fired ring dryer at a maximum throughput of 15,800 lb/hr. Particulate emissions are controlled by wet scrubber (CE121-01-G) that exhausts to stack S121-01-G.

(g) No. 2 Gluten Dryer (Unit ID 121A-01-G), approved for construction in 2008. Gluten meal is fed to a 17 MMBtu/hr natural and bio gas-fired ring dryer at a maximum throughput of 19,700 lb/hr. Particulate emissions are controlled by two (2) wet scrubbers operating in series, one venturi-type followed by one tray-type scrubber (collectively identified as Unit ID CE121A-01-G) that exhausts to stack S121A-01-G.

(h) One (1) Germ Dryer/Cooler (Unit ID 203-01-G), approved for construction in 2008. Corn germ is fed to a 30 MMBtu/hr natural and bio gas-fired germ dryer and cooler at a maximum throughput of 38,600 lb/hr. Particulate emissions are controlled by one (1) wet scrubber (Unit ID CE203-01-G) that exhausts to stack S203-01-G.

(i) No. 1 Bran Bunker (Unit ID 89-06-G), approved for construction in 2008, with a maximum throughput rate of 107,433 tons per year, using a bin vent filter (Unit ID CE089-06-G) with an outlet grain loading of 0.01 gr/dscf as control, and exhausting to stack S89-06-G.

(j) No. 2 Bran Bunker (Unit ID 89-07-G), approved for construction in 2008, with a maximum throughput rate of 107,433 tons per year, using a bin vent filter (Unit ID CE89-07-G) with an outlet grain loading of 0.01 gr/dscf as control, and exhausting to stack S89-07-G.

(k) One (1) Bran Conveyor System (Unit ID 89-08-G), approved for construction in 2008, with a maximum throughput rate of 107,433 tons per year, using existing scrubber CE89-01-G (constructed in 1995) as control, and exhausting to stack S89-01-G.

(l) One (1) Bran Preweigh Hopper (Unit ID 89-09-G), approved for construction in 2008, with a maximum throughput rate of 107,433 tons per year, using a bin vent filter (Unit ID CE89-09-G) with an outlet grain loading of 0.01 gr/dscf as control, and exhausting to stack S89-09-G.

(m) Fiber Drying Equipment (Unit ID 89-01-G), installed in October 1995. Wet fiber is fed to this 78 MMBtu/hr natural gas-fired dryer at a maximum throughput of 79,695 lb/hr. Particulate matter is controlled by a scrubber (CE89-01-G) that exhausts to stack S89-01-G.

(n) Germ Dryer/Cooler (Unit ID 124A-01-G), installed in November 1994. Corn germ is fed to this 12.9 MMBtu/hr natural and bio gas-fired germ dryer and cooler at a maximum throughput of 16,580 lb/hr. Particulate emissions are controlled by one

(1) scrubber (CE124A-01-G) that exhausts to stack S124A-01-G.

(o) Central Vacuum Loadout (Unit ID 200-07-G), installed in October 2000, with a maximum throughput of 100 lb/hr. Particulate emissions are controlled by a dust collector (CE200-07-G) that exhausts to stack S200-07-G.

(p) Germ Tank 1310 (Unit ID 200-01-G), installed in October 2000, with a maximum throughput of 80,000 lb/hr. Particulate emissions are controlled by a dust collector (CE200-01-G) that exhausts to stack S200-01-G.

(q) Gluten Tank 1410 (Unit ID 200-02-G), installed in October 2000, with a maximum throughput of 80,000 lb/hr. Particulate emissions are controlled by a dust collector (CE200-02-G) that exhausts to stack S200-02-G.

(r) Corn Screenings Silo (Unit ID 200-06-G), installed in October 2000 and approved in 2012 to increase airflow from 400 cubic feet per minute (cfm) to 1,200 cfm with a maximum throughput of 11,000 lb/hr. Particulate emissions are controlled by a dust collector (CE200-06-G) that exhausts to stack S200-06-G.

(s) Gluten Tank 1010 (Unit ID 200-04-G), installed in October 2000, with a maximum throughput of 21,000 lb/hr. Particulate emissions are controlled by a dust collector (CE200-04-G) that exhausts to stack S200-04-G.

(t) Germ Tank 1110 (Unit ID 200-03-G), installed in October 2000, with a maximum throughput of 30,000 lb/hr. Particulate emissions are controlled by a dust collector (CE200-03-G) that exhausts to stack S200-03-G.

(u) Bulk Loadout (Unit ID 200-05-G), installed in October 2000, with a maximum throughput of 95,900 lb/hr. Particulate emissions are controlled by a dust collector (CE200-05-G) that exhausts to stack S200-05-G.

(v) Corn Dump Pit (Unit ID 140-05-G), installed in December 1995, with a maximum throughput of 840 tons/hr. Particulate emissions are controlled by filter baghouse (CE140-05-G) that exhausts to stack S140-05-G.

(w) Corn Elevator Conveying (Unit ID 140-07-G), installed in December 1995, with a maximum throughput of 140 tons/hr. Material is transferred from corn belt 1 to corn belt 2. Particulate emissions are controlled by a filter baghouse (CE140-07-G) that exhausts to stack S140-07-G.

(x) Corn Receiving and Storage, installed in December 1995. This system includes six Storage Bins, each with its own bin vent for control of particulate emissions, and each with a maximum throughput of 420 ton/hr:

(1) Bin #1: Unit ID 140-01-G
(2) Bin #2: Unit ID 140-02-G
(3) Bin #3: Unit ID 140-03-G
(4) Bin #4: Unit ID 140-04-G
(5) Bin #5: Unit ID 33-01-G
(6) Bin #6: Unit ID 33-02-G

(y) Gravity Take-up Conveyor (Corn Scale) (Unit ID 140-06-G), installed in December 1995, with a maximum throughput of 140 ton/hr. Corn is transferred from corn belt 2 to corn belt 3. Particulate emissions are controlled by baghouse (CE140-06-G) that exhausts to stack S140-06-G.

(z) Corn Cleaner (Unit ID 33-03-G), installed in December 1995, with a maximum throughput of 140 ton/hr. Corn passes through mechanical cleaners. Particulate

emissions are controlled by a filter baghouse (CE33-03-G) that exhausts to stack S33-03-G.

(aa) Three (3) Gluten Filters, installed in December 1995. Gluten slurry is applied to the surface of a filter drum where an internal vacuum on the drum removes moisture from the slurry. The Gluten is then removed from the drum by a roller. Exhaust from the removal process is collected by a hood and exhausted from the building.

(bb) Three (3) Gluten Vacuum Pumps, installed in December 1995. The pumps create the vacuum used to remove moisture from the gluten slurry on the gluten filter. Exhaust from the pumps is vented from the building.

(cc) Twenty-four (24) steep tanks (Unit ID Steephouse - Grind 1), consisting of 21 steep tanks installed prior to 1973 and 3 steep tanks installed in December 1995. The steep tanks contain a mildly acidic solution to soften the corn prior to milling. Tanks are individually vented and have only working/breathing losses.

IV. Utility Area

The Utility area includes the following boiler used to supply steam for plant processes.

(dd) Natural gas-fired Package Boiler #1 (Unit ID 89-03-U), installed in 2006, with a maximum heat input capacity of 247 million Btu/hr, and exhausting to stack S89-03-U. Under NSPS 40 CFR 60 Subpart Db, Package Boiler #1 is a steam-generating unit with a heat input capacity greater than 100 million Btu/hr.

V. Refinery Area

(ee) Reserved

(ff) Corn Syrup Spray Dryer #4 (Unit ID 100-03-R), installed in April 1992. Corn syrup is fed to a dryer at a maximum throughput of 4.8 ton/hr. The solids are sent through cyclones to a packing area. Particulate emissions are controlled by a wet scrubber (CE100-03-R) that exhausts to stack S100-03-R.

(gg) Corn Syrup Spray Dryer/Cooler System #3 (Unit ID 100-01-R), installed in July 1987. Corn syrup is fed to a dryer at a maximum rate of 4.8 ton/hr. The solids are sent through cyclones to a packing area. Particulate emissions are controlled by a wet venturi scrubber (CE100-01-R) that exhausts through stack S100-01-R.

(hh) Activated Carbon Regeneration Furnace #2 (Unit ID 104-01-R), installed in July 1995. Spent carbon is regenerated in this 13.2 MMBtu/hr natural gas-fired furnace at a maximum throughput of 1.146 ton/hr. Emissions are controlled by a venturi scrubber and an impingement furnace scrubber (CE104-01-R) that exhaust through stack S104-01-R.

(ii) Liquid Soda Ash Tank (Unit ID 104-02-R), installed in July 1995, with a maximum throughput of 15 ton/hr. Particulate emissions from loading this tank are controlled by a venturi scrubber (CE104-02-R) that exhausts to stack S104-02-R.

(jj) Filter Aid Hopper (Unit ID 104-03-R), installed in July 1995, with a maximum throughput of 0.75 ton/hr. This hopper is equipped with a jet pulse baghouse (CE104-03-R) that exhausts to stack S104-03-R.

(kk) Sodium Bisulfite Bag Dump (Unit ID 104-05-R), installed in July 1995, with a maximum throughput of 0.7 ton/hr. This unit is controlled by a jet pulse baghouse (CE104-05-R) that exhausts to stack S104-05-R.

(ll) Diatomaceous Earth Unloading (Unit ID 104-08-R), installed in November 1998**,** with a maximum throughput of 1.75 ton/hr. Diatomaceous earth (filter aid) is unloaded from railcar to silo. Particulate emissions are controlled by a Bin Vent Filter (DC2312) that exhausts to stack S104-08-R.

(mm) Citric Acid Dump Station (Unit ID 104-09-R), installed in November 1998, with a maximum throughput of 30 lb/hr. Citric Acid is added during the production of corn syrup. Particulate emissions are controlled by a built-in dust collector (CE104-09-R) that exhausts to stack S104-09-R.

(nn) Refinery Vacuum Pumps (1-3) (Unit IDs RVF 1-1, RVF 1-2, and RVF 1-3 Precoating Vacuum Pump), installed in July 1995. The pumps create the vacuum used to pull liquid corn syrup through a filtering media. Exhaust from the pumps is vented from the building.

(oo) Refinery Vacuum Pumps (4-6) (Unit IDs RVF 3-1, RVF 3-2, and RVF 3-3 Precoating Vacuum Pump), installed in November 1999. The pumps create the vacuum used to pull liquid corn syrup through a filtering media. Exhaust from the pumps is vented from the building.

(pp) Refinery Vacuum Pumps (7-8) (Unit IDs RVF 2-1 and RVF 2-2), installed in July 1995. The pumps create the vacuum used to pull liquid corn syrup through a filtering media. Exhaust from the pumps is vented from the building.

(qq) Two (2) HCL tanks (Unit ID HCL Tank – Refinery), installed in July 1995 and December 2002. Tanks store HCl used in the corn syrup manufacturing process. The tanks vent to an acid fume scrubber.

VI. Starch Production Area

(rr) Batch Scale Hopper #1 (Unit ID 34-01-S), installed in January 1991, with a maximum throughput of 24 ton/hr. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34-01-S) that exhausts to stack S34-01-S.

(ss) Dextrin Starch Reactor #1 (Unit ID 34-02-S), installed in January 1991, with a maximum throughput of 6 ton/hr. Dried cornstarch is fed to a reactor heated by steam from the plant boiler. Particulate emissions are controlled by a bag filter dust collector (CE34-02-S) that exhausts to stack S34-02-S.

(tt) Dextrin Starch Cooler #1 (Unit ID 34-03-S), installed in January 1991, with a maximum throughput of 6 ton/hr. Roasted cornstarch is fed to a cooler and transferred to a hopper for storage. Particulate emissions are controlled by a bag filter dust collector (CE34-03-S) that exhausts to stack S34-03-S.

(uu) Surge Hopper #1 (Unit ID 34-05-S), installed in January 1991, with a maximum throughput of 6 ton/hr. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34-05-S) that exhausts to stack S34-05-S.

(vv) Reserved

(ww) Batch Scale Hopper #2 (Unit ID 34B-13-S), installed in October 1993, with a maximum throughput of 24 ton/hr. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34B-13-S) that exhausts to stack S34B-13-S.

(xx) Dextrin Starch Reactor #2 (Unit ID 34B-04-S), installed in October 1993, with a maximum throughput of 6 ton/hr. Dried cornstarch is fed to a reactor heated by steam from the plant boiler. Particulate emissions are controlled by a bag filter dust collector (CE34B-04-S) that exhausts to stack S34B-04-S.

(yy) Dextrin Starch Cooler #2 (Unit ID 34B-01-S), installed in October 1993, with a maximum throughput of 6 ton/hr. Roasted cornstarch is fed to a cooler and transferred to a hopper for storage. Particulate emissions are controlled by dust collector (CE34B-01-S) that exhausts to stack S34B-01-S.

(zz) Surge Hopper #2 (Unit ID 34B-03-S), installed in October 1993, with a maximum throughput of 6 ton/hr. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34B-03-S) that exhausts to stack S34B-03-S.

(aaa) Dextrin Feed Hoppers #3 and #4 (System #2) (Unit IDs 34B-05-S and 34B-06-S), installed in October 1993, each with a maximum throughput of 6 ton/hr. Starch is gravity conveyed to these hoppers. Particulate emissions are controlled by bag filter dust collectors (CE34B-05-S and CE34B-06-S) that exhaust to stacks S34B-05-S and S34B-06-S.

(bbb) Dextrin Bulk Loading Equipment (Unit ID 48-09-S), installed before 1977, with a maximum throughput of 30 ton/hr. Starch is pneumatically conveyed to this hopper. Particulate emissions are controlled by a bag filter dust collector (CE48-09-S) that exhausts to stack S48-09-S.

(ccc) Starch Ring Dryer #2 (Unit ID 59-03-S), installed in November 1993. Starch is fed to this 25 MMBtu/hr natural gas-fired ring dryer at a maximum throughput of 13.5 ton/hr. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by a wet scrubber (CE59-03-S) that exhausts to stack S59-03-S.

(ddd) Starch Ring Dryer #3 (Unit ID 125-01-S), installed in May 1980. Cornstarch is fed to this 62 MMBtu/hr natural gas-fired ring dryer at a maximum throughput of 26.55 ton/hr. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by a wet scrubber (CE125-01-S) that exhausts to stack S125-01-S.

(eee) Reserved

(fff) Special Starch Process with Starch Ring Dryer #4 (Unit ID 128-01-S), installed in December 1993. Cornstarch is fed to this 30 MMBtu/hr natural gas-fired dryer at a maximum throughput of 12.5 ton/hr. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by wet scrubber (CE128-01-S) that exhausts to stack S128-01-S.

(ggg) Reactors #2 through #8 (Unit IDs 128-07-S through 128-13-S), installed in November 1988 (2-4) and December 1991 (5-8), each can process up to 40 tons of starch. Cornstarch and propylene oxide are reacted through Reactors 2, 3, 4, and 7 only. When propylene oxide is used, each reactor can use up to 5 tons of propylene oxide per batch. When propylene oxide is used in the starch reaction, VOC emissions are controlled by a thermal oxidizer S128-14-S that exhausts to stack S128-14-S.

(hhh) Sodium Sulfate Storage Bin (Unit ID 128-25-S), installed in October 2000, with a maximum throughput of 1.1 ton/hr. Particulate emissions are controlled by a bin vent dust collector (FA1900), that exhausts to stack S128-25-S.

(iii) Sodium Sulfate Weigh Bin (Unit ID 128-26-S), installed in October 2000, with a maximum throughput of 1.1 ton/hr. Particulate emissions are controlled by a bin vent dust collector (FA1950), that exhausts to stack S128-26-S.

(jjj) Cornstarch Storage Bins #20 through #36 (Unit IDs 120-01-S through 120-17-S), installed in July 1990 and approved in 2011 for modification to increase airflow into Cornstarch Storage Bin No. 23 (ID 120-04-S) to allow for the milled starch from the Nos. 1 and 2 Starch Milling Systems to directly convey starch to Cornstarch Storage Bin No. 23 (ID 120-04-S), each with a maximum throughput of 75 ton/hr. Cornstarch is pneumatically conveyed to these storage bins. Particulate emissions are controlled by bag filter dust collectors that exhaust to stacks S120-01-S through S120-17-S.

(kkk) Waxy Cornstarch Bulk Storage Bins #95 through #98 (Unit IDs 126-01-S through 126-04-S), replaced in January 1996, each with a maximum throughput of 20.5 ton/hr. Waxy cornstarch is conveyed to these bins. Particulate emissions are controlled by dust collectors (CE126-01-S through CE126-04-S) that exhaust to stacks S126-01-S through S126-04-S.

(lll) Cornstarch Blending Systems #1 through #4 (Unit IDs 130-01-S through 130-04-S), installed in April 1988, each with a maximum throughput of 30 ton/hr. Cornstarch is blended and moved to the warehouse for packing. Particulate emissions are controlled by bag filter dust collectors (CE130-01-S through 130-04-S) that exhaust to stacks S130-01-S through S130-04-S.

(mmm) Dextrin Blender (Unit ID 130-05-S), installed in October 1993, with a maximum throughput of 30 ton/hr. Cornstarch is blended and moved to the warehouse for packing. Particulate emissions are controlled by a bag filter dust collector (CE130-05-S) that exhausts to stack S130-05-S.

(nnn) One (1) propylene oxide tank, approved in 2015 for construction, identified as 93-18-S, with a maximum capacity of 28,000 gallons, equipped with a thermal oxidizer (CE93-41-S). This tank also provides propylene oxide to other starch processes.

(nnn1) One (1) 28,000 gallon horizontal propylene oxide tank (Unit ID 93-18-S), installed in 1988, with 95% efficient vapor recovery (liquid nitrogen condenser). This tank also provides propylene oxide to other starch processes.

(ooo) Bldg 128 Tank Farm, approved in 2015 for construction. Tanks include HCl, hydrogen peroxide, sodium hypochlorite and sodium Bisulfate storage tanks. The tanks vent to an acid fume scrubber.

(ooo1) Bldg 128 Tank Farm, installed in November 1999. Tanks include HCl, Acetic Anhydride, Sodium Bisulfate storage tanks, and the Acetic/Adipic mix tank.

Note: The one (1) propylene oxide tank (Unit ID 93-18-S), installed in 1988, and Bldg 128 Tank Farm, installed in November 1999, were removed from the permit through MSM No. 089-35720-00203 and SPM No. 089-35732-00203; however, these units have not yet been removed from the source and their replacement units have not yet been constructed. These units are being re-incorporated into the permit and will be removed at a later date upon replacement with the one (1) propylene oxide tank and Bldg 128 Tank Farm approved in 2015 for construction.

VII. Starch Warehouse Area

(ppp) Channel 2 Receiver (Unit ID 93-32-W), installed in September 2000, with a maximum throughput of 15 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-32-W.

(qqq) Channel 3 Receiver (Unit ID 93-33-W), installed in September 2000, with a maximum throughput of 25 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-33-W.

(rrr) Channel 4 Receiver (Unit ID 93-34-W), installed in September 2000, with a maximum throughput of 15 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-34-W.

(sss) Channel 6 Receiver (Unit ID 93-35-W), installed in September 2000, with a maximum throughput of 4.5 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-35-W.

(ttt) Channel 4/6 Packing (Unit ID 93-37-W), installed in September 2000, with a maximum throughput of 40 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-37-W.

(uuu) Channel 2/3 Packing (Unit ID 93-36-W), installed in September 2000, with a maximum throughput of 40 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-36-W.

(vvv) Central Vacuum System (Unit ID 93-38-W), installed in October 2000, with a maximum throughput of 100 lb/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-38-W.

(www) Dried Corn Syrup Conveying System (Unit ID 93-04-W), installed in July 1976, with a maximum throughput of 15 ton/hr. Particulate emissions are controlled by a baghouse (CE93-04-W) that exhausts to stack S93-04-W.

(xxx) Corn Syrup Solids Conveying System (Unit ID 93-05-W), installed in July 1976, with a maximum throughput of 10 ton/hr. Particulate emissions are controlled by a baghouse (CE93-05-W) that exhausts to stack S93-05-W.

(yyy) Frodex Semi-bulk Packing System (Unit ID 93-08-W), installed in September 1989, with a maximum throughput of 10 ton/hr. Particulate emissions are controlled by a baghouse (CE93-08-W) that exhausts to stack S93-08-W.

(zzz) Cornstarch Bag Dumping Stations #1 and #2 (Unit IDs 93-09-W and 93-10-W), installed in April 1988, each with a maximum throughput of 1.2 ton/hr. Particulate emissions are controlled by bag filter dust collectors (CE93-09-W and CE93-10-W) that exhaust to stacks S93-09-W and S93-10-W.

(aaaa) Starch Bulk Loading (Unit ID 93-14-W), installed in April 1995, with a maximum throughput of 30 ton/hr. Particulate emissions are controlled by a baghouse (CE93-14-W) that exhausts to stack S93-14-W.

(bbbb) Starch Bulk Loading Vacuum Cleanup System (Unit ID 93-15-W), installed in February 1994, with a maximum throughput of 1 ton/hr. Cleanup for cornstarch spills. Particulate emissions are controlled by bag filter dust collector (CE93-15-W) that exhausts to stack S93-15-W.

(cccc) Starch Mixing and Bulk Bagging Systems #1 and #2 (Unit IDs 93-16-W and 93-17-W), installed in August 1995, each with a maximum throughput of 25 ton/hr and 12.5 ton/hr, respectively. Particulate emissions are controlled by baghouses (CE93-16-W and CE93-17-W) that exhaust to stacks S93-16-W and S93-17-W.

(dddd) P.G. Starch Receiver (Unit ID 93-18-W), installed in September 1999, with a maximum throughput of 3 ton/hr. Starch is received from P.G. starch roll dryers for packaging. Particulate emissions are controlled by a dust collector (CE93-18-W) that exhausts to stack S93-18-W.

(eeee) P.G. Starch Packing (Unit ID 93-39-W), installed in January 2000, with a maximum throughput of 3 ton/hr. Particulate emissions are controlled by a dust collector (CE93-39-W) that exhausts to stack S93-39-W.

(ffff) Corn Syrup Solids Manufacturing System #5, approved in 2010 for construction, identified as Unit ID 93-40-W, with a maximum capacity of 6,000 lbs/hr (dry basis), using dust collector (CE93-40-W) as control, and exhausting to stack S93-40-W.

Emission Units and Pollution Control Equipment Removed From the Source

The source has not constructed the following emission units (previously permitted under SSM No. 089-25241-00203 and SPM No. 089-25259-00203):

(a) No. 2 Gluten Dryer (Unit ID 121A-01-G), approved for construction in 2008. Gluten meal is fed to a 17 MMBtu/hr natural and bio gas-fired ring dryer at a maximum throughput of 19,700 lb/hr. Particulate emissions are controlled by two (2) wet scrubbers operating in series, one venturi-type followed by one tray-type scrubber (collectively identified as Unit ID CE121A-01-G) that exhausts to stack S121A-01-G.

(b) One (1) Germ Dryer/Cooler (Unit ID 203-01-G), approved for construction in 2008. Corn germ is fed to a 30 MMBtu/hr natural and bio gas-fired germ dryer and cooler at a maximum throughput of 38,600 lb/hr. Particulate emissions are controlled by one (1) wet scrubber (Unit ID CE203-01-G) that exhausts to stack S203-01-G.

(c) No. 1 Bran Bunker (Unit ID 89-06-G), approved for construction in 2008, with a maximum throughput rate of 107,433 tons per year, using a bin vent filter (Unit ID CE089-06-G) with an outlet grain loading of 0.01 gr/dscf as control, and exhausting to stack S89-06-G.

(d) No. 2 Bran Bunker (Unit ID 89-07-G), approved for construction in 2008, with a maximum throughput rate of 107,433 tons per year, using a bin vent filter (Unit ID CE89-07-G) with an outlet grain loading of 0.01 gr/dscf as control, and exhausting to stack S89-07-G.

(e) One (1) Bran Conveyor System (Unit ID 89-08-G), approved for construction in 2008, with a maximum throughput rate of 107,433 tons per year, using existing scrubber CE89-01-G (constructed in 1995) as control, and exhausting to stack S89-01-G.

(f) One (1) Bran Preweigh Hopper (Unit ID 89-09-G), approved for construction in 2008, with a maximum throughput rate of 107,433 tons per year, using a bin vent filter (Unit ID CE89-09-G) with an outlet grain loading of 0.01 gr/dscf as control, and exhausting to stack S89-09-G.

These emission units and their associated permitting requirements are being removed from the permit through these permitting actions (SSM No. 089-36416-00203 and TV Renewal No. 089-36144-00203).

Insignificant Activities

The source also consists of the following insignificant activities:

(a) Combustion source flame safety purging on startup.

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

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

(d) VOC and HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

(e) VOC and HAP vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

(f) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.

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

(h) Cleaners and solvents characterized as follows:

(1) having a vapor pressure equal to or less than 2 kPa; 15mm Hg; or 0.3 psi measured at 38°C (100°F) or;

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

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

(j) Closed loop heating and cooling systems.

(k) Structural steel and bridge fabricating activities using 80 tons or less of welding consumables.

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

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

(n) Operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs.

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

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

(q) Heat exchanger cleaning and repair.

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

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

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

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

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

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

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

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

(z) Filter or coalesce media changeout.

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

Existing Approvals

The source was issued Part 70 Operating Permit No. T089-27009-00203 on June 13, 2011. The source has since received the following approvals:

(a) Administrative Amendment No. 089-31149-00203, issued on November 30, 2011;
(b) Significant Permit Modification No. 089-30779-00203, issued on July 13, 2012;
(c) Minor Source Modification No. 089-35720-00203, issued on May 8, 2015; and
(c) Significant Permit Modification No. 089-35732-00203, issued on July 1, 2015.

Air Pollution Control Justification as an Integral Part of the Process

The Permittee had previously submitted the following information to justify why the cyclones associated with the gluten dryer (121-01-G) and germ dryer (124A-01-G) should be considered an integral part of the process:

(a) The cyclones were not installed for the purpose of particulate control; they are only present to provide product separation from the exhaust of the dryer.

(b) The cyclones pull exhaust from the dryers and feed it into the wet scrubbers (used for control). If the cyclones are not in operation, then exhaust cannot be directed to the wet scrubbers without a physical bypass being added to the system. No alternate method of operation is possible. The dryers could not operate without the cyclones and are, therefore, integral to the process.

IDEM, OAQ had evaluated the information submitted and agreed that the cyclones associated with the gluten dryer (121-01-G) and germ dryer (124A-01-G) should be considered an integral part of the drying process. Therefore, the permitting level was determined using the potential to emit after the cyclones.

This conclusion was initially determined under Part 70 Operating Permit Renewal T089-27009-00203 issued on June 6, 2011.

County Attainment Status

The source is located in Lake County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of East Chicago bounded by Columbus Drive on the north; the Indiana Harbor Canal on the west; 148th Street, if extended, on the south; and Euclid Avenue on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of East Chicago and Lake County.
O_3	On June 11, 2012, the U.S. EPA designated Lake County nonattainment, for the 8-hour ozone standard. [1][2]
$PM_{2.5}$	Unclassifiable or attainment effective February 6, 2012, for the annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 24-hour $PM_{2.5}$ standard.
PM_{10}	Attainment effective March 11, 2003, for the cities of East Chicago, Hammond, Whiting, and Gary. Unclassifiable effective November 15, 1990, for the remainder of Lake County.
NO_2	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

[1]The U. S. EPA has acknowledged in both the proposed and final rulemaking for this redesignation that the anti-backsliding provisions for the 1-hour ozone standard no longer apply as a result of the redesignation under the 8-hour ozone standard. Therefore, permits in Lake County are no longer subject to review pursuant to Emission Offset, 326 IAC 2-3 for the 1-hour standard.
[2]The department has filed a legal challenge to U.S. EPA's designation in 77 FR 34228.

(a) Ozone Standards
U.S. EPA, in the Federal Register Notice 77 FR 112 dated June 11, 2012, has designated Lake County as nonattainment for ozone. On August 1, 2012, the air pollution control board issued an emergency rule adopting the U.S. EPA's designation. This rule became effective August 9, 2012. IDEM does not agree with U.S. EPA's designation of nonattainment. IDEM filed a suit against U.S. EPA in the U.S. Court of Appeals for the DC Circuit on July 19, 2012. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's designation. Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Therefore, VOC and NO_x emissions were evaluated pursuant to the requirements of Emission Offset, 326 IAC 2-3.

(b) $PM_{2.5}$
Lake County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Other Criteria Pollutants
Lake County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Source Status - Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	**Emissions** (ton/yr)
PM	183.71
PM_{10}	179.07
$PM_{2.5}$	173.48
SO_2	469.27
NO_X	330.03
VOC	549.94
CO	545.88
Single HAP	>10
Total HAPs	>25

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a PSD regulated pollutant, excluding GHGs, is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is a major stationary source, under Emission Offset (326 IAC 2-3), because VOC and NOx, precursors to a nonattainment regulated pollutant, are emitted at a rate of 100 tons per year or more.

(c) These emissions are based upon TSD Appendix A for MSM 089-35720-00203 and SPM 089-35732-00203.

(d) This existing source is a major source of HAPs, as defined in 40 CFR 63.2, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Cargill, Inc. on August 10, 2015, relating to the addition of two (2) silos and two (2) bucket elevators to the existing Grind and Feedhouse Area, three (1) backup emergency generators, and six (6) heaters to the facility. The following is a list of the proposed emission units and pollution control device(s):

(a) Two (2) corn storage silos at the Corn Dump Pit and Receiving system, approved in 2016 for construction, identified as 140-08-G and 140-09-G, each with a maximum throughput of 420 tons/hr, using baghouses CE-140-08-G and CE-140-09-G as control, and exhausting to bin vents 140-08-G and 140-09-G, respectively.

(b) Two (2) bucket elevators at the Corn Dump Pit and Receiving System, approved in 2016 for construction, identified as Bucket Elevators No. 2a and 2b, using baghouse CE140-05-G as control, exhausting to stack S140-05-G.

(c) One (1) diesel-fired emergency generator, identified as 93-41-S, approved in 2016 for construction, with a rating of 496 HP, manufactured after 2009.

Under NSPS, Subpart IIII, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(d) One (1) gasoline-fired emergency generator, identified as Generac Model GP5000 (manufactured in 2009, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.16 MMBtu/hr (22.9 HP).

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(e) One (1) gasoline-fired emergency generator, identified as Honda EU7000 (manufactured in 2014, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.1 MMBtu/hr (14.3 HP).

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(f) Six (6) kerosene-fired Dayton Torpedo heaters, approved in 2016 for construction, with a total combined heat input capacity of 1.05 MMBtu/hr.

The Permittee has also requested to remove emission units, permit requirements, and the enforceability of the emissions decreases from the Contemporaneous Netting Analysis attributed to the Grind Modernization Project that were established in Significant Source Modification No. 089-25241-00203. The units associated with the Grind Modernization Project were never constructed. In addition to granting construction approval for the of two (2) silos and two (2) bucket elevators to the existing Grind and Feedhouse Area, and one (1) backup emergency generator to the facility, the Significant Source Modification No. 089-36416-000203 will be the revised version of the issued SSM No. 089-25241-00203 and will be reissued without the emission unit descriptions, permit requirements, and the enforceability of the emissions decreases from the Contemporaneous Netting Analysis attributed to the Grind Modernization Project. The following are the units associated with the Grind Modernization Project that were never constructed:

No. 2 Gluten Dryer (Unit ID 121A-01-G)
One (1) Germ Dryer/Cooler (Unit ID 203-01-G)
No. 1 Bran Bunker (Unit ID 89-06-G)
No. 2 Bran Bunker (Unit ID 89-07-G)
One (1) Bran Conveyor System (Unit ID 89-08-G)
One (1) Bran Preweigh Hopper (Unit ID 89-09-G).

Enforcement Issues

There are no pending enforcement actions related to this modification and Part 70 Renewal.

Emission Calculations

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

Permit Level Determination – Part 70 Modification to an Existing Source

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency."

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit. If the control equipment has been determined to be integral, the table reflects the PTE after consideration of the integral control device.

Increase in PTE Before Controls of the Modification*	
Pollutant	**Potential To Emit** (ton/yr)
PM	1,502
PM_{10}	1,502
$PM_{2.5}$	1,502
SO_2	2.59
VOC	0.35
CO	1.06
NO_X	4.61
Single HAP	Negligible
Total HAPs	0.01

*Note: New Units: Three (3) emergency generators, six (6) Torpedo Heaters and two (2) silos (140-08-G and 140-09-G). The two (2) proposed elevators are part of an existing receiving process and will exhaust to an existing control device shared by existing emission units. The potential to emit of pollutants from these two units have not been calculated separately.

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 PM, PM10, and direct PM2.5 is greater than twenty-five (25) tons per year , each, before control. Significant Source Modification No. 089-36416-00203 is the revised version of previously issued SSM No. 089-25241-00203 which will be issued without the emissions units, permit requirements, and conditions associated with the emission decreases from the Contemporaneous Netting Analysis attributed to the Grind Modernization Project that were established in that permitting action.

The modification would have been required to be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d), because the modification does not qualify for a minor permit modification or an administrative amendment and includes a significant change in existing monitoring Part 70 terms and conditions. For the purposes of this permitting action, the significant permit modification has been combined with the current Part 70 Operating Permit Renewal. Therefore, operation is not approved until the Part 70 Operating Permit Renewal has been issued.

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 Renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Project Emissions (ton/yr)								
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**NO_X**	**VOC**	**CO**	**GHGs**	**Other**
Silos 140-08-G, 140-09-G	24.00	14.02	9.64	--	--	--	--	--	--
Diesel-Fired Emergency Generator 93-41-S	0.27	0.27	0.27	0.25	3.84	0.31	0.83	143.1	--
Gasoline-Fired Emergency Generators (Generac and Honda)	0.01	0.01	0.01	0.01	0.11	0.14	0.06	10.0	-
Six (6) Torpedo Heaters	0.07	0.08	0.07	2.33	0.66	0.01	0.16	709	-
Total for Modification	24.35	14.37	9.99	2.59	4.61	0.35	1.06	862.1	--
Significant Thresholds	25	15	10	40	40	40	100	75,000 CO_2e	NA

*$PM_{2.5}$ listed is direct $PM_{2.5}$.

This modification to an existing major PSD stationary source is not major because:

(a) The emissions increase of each PSD regulated pollutant, excluding GHGs, are less than the PSD significant thresholds; and

(b) The emissions increase of GHGs from this modification to an existing major PSD source are less than seventy-five thousand (75,000) tons of CO_2 equivalent (CO_2e) emissions per year.

Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

(c) This modification to an existing major Emission Offset stationary source is not major because the emissions increase of VOC and NOx are less than the Emission Offset significant thresholds. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable:

(a) The PM, PM10 and PM2.5 emissions from the following operations shall not exceed the emissions limits listed in the table below:

Unit	Unit ID	Control Device ID	PM Emission Limit (lb/hr)	PM10 Emission Limit (lb/hr)	PM2.5 Emission Limit (lb/hr)
Corn Silo	140-08-G	CE140-08-G	2.74	1.60	1.10
Corn Silo	140-09-G	CE140-09-G	2.74	1.60	1.10

Compliance with these emission limits, in combination with the potential to emit of PM, PM10 and PM2.5 of the emergency generator 93-41-S, will ensure that the potential to emit from this modification (SSM No. 089-36416-00203) is less than twenty-five (25) tons of PM per year, less than fifteen (15) tons of PM_{10} per year, ten (10) tons of direct $PM_{2.5}$ per year, and therefore will render the requirements of 326 IAC 2-2 not applicable.

Reissuance of Significant Source Modification No.: 089-25241-00203 issued on May 20, 2008:

The following equipment was permitted under SSM 089-25241-00203 but was not constructed and will be removed from the permit:

No. 2 Gluten Dryer (Unit ID 121A-01-G)
One (1) Germ Dryer/Cooler (Unit ID 203-01-G)
No. 1 Bran Bunker (Unit ID 89-06-G)
No. 2 Bran Bunker (Unit ID 89-07-G)
One (1) Bran Conveyor System (Unit ID 89-08-G)
One (1) Bran Preweigh Hopper (Unit ID 89-09-G).

The emission increases under SSM No. 089-25241-00203 have been updated (**bold** to show additions and ~~strike-through~~ to show deletions):

Emissions (ton/yr)						
Process / Emission Unit	PM	PM_{10}	SO_2	VOC	CO	NO_X
~~*PTE (New Units)*~~						
~~No. 2 Gluten Dryer~~	~~10.51~~	~~10.51~~	~~7.03~~	~~7.01~~	~~16.08~~	~~7.45~~
~~Germ Dryer/Cooler (new)~~	~~12.31~~	~~12.31~~	~~17.25~~	~~9.16~~	~~5.40~~	~~13.14~~
~~No. 1 Bran Bunker~~	~~0.03~~	~~0.03~~	~~-~~	~~-~~	~~-~~	~~-~~
~~No. 2 Bran Bunker~~	~~0.03~~	~~0.03~~	~~-~~	~~-~~	~~-~~	~~-~~
~~Bran Conveyor System~~	~~1.40~~	~~1.40~~	~~-~~	~~-~~	~~-~~	~~-~~
~~Bran Preweigh Hopper~~	~~0.03~~	~~0.03~~	~~-~~	~~-~~	~~-~~	~~-~~
~~PTE~~	~~24.30~~	~~24.30~~	~~24.28~~	~~16.17~~	~~21.48~~	~~20.59~~
~~*Actual to Projected Actual (Grind Area Units Increased Utilization)*~~						
~~Baseline~~	~~29.88~~	~~29.88~~	~~7.09~~	~~36.13~~	~~128.62~~	~~28.10~~
~~Projected Actuals~~	~~51.04~~	~~51.04~~	~~10.29~~	~~32.60~~	~~81.13~~	~~41.61~~
~~Emissions Increases (ATPA)~~	~~21.16~~	~~21.16~~	~~3.20~~	~~<0~~	~~<0~~	~~13.51~~
*Actual to Projected Actual (BCD Area Modified Units***- Conversion to ACD)***						
Baseline	1.13	1.13	-	-	-	-
Projected Actuals	1.70	1.70	-	-	-	-
Emissions Increases (ATPA)	0.57	0.57	-	-	-	-
~~*Hybrid Test*~~						
~~Total PTE New Units~~	~~24.30~~	~~24.30~~	~~24.28~~	~~16.17~~	~~21.48~~	~~20.59~~
Total Emissions Increase from **BCD to ACD** ~~ATPA~~	~~21.73~~ **0.57**	~~21.73~~ **0.57**	~~3.20~~ **0**	~~<0~~ **0**	~~<0~~ **0**	~~13.51~~ **0**
~~Hybrid Test Emissions Increase~~	~~46.02~~	~~46.02~~	~~27.48~~	~~16.17~~	~~21.48~~	~~34.10~~
PSD Significant Threshold	25	15	40	40	100	40

*** Conversion of Beta Cyclodextrin (BCD) Area to Alternate Carbohydrate Area.**

The following are the updated emissions increases from the modification originally permitted under SSM No. 089-25241-00203, which is being re-permitted under SSM 089-36416-00203:

Emissions (ton/yr)						
Process / Emission Unit	PM	PM_{10}	SO_2	VOC	CO	NO_X
Actual to Projected Actual (BCD Area Modified Units- Conversion to ACD)						
Baseline	1.13	1.13	-	-	-	-
Projected Actuals	1.70	1.70	-	-	-	-
Emissions Increases (ATPA)	0.57	0.57	-	-	-	-
Total Emissions Increase from BCD to ACD	0.57	0.57	0	0	0	0
PSD Significant Threshold	25	15	40	40	100	40

* Conversion of Beta Cyclodextrin (BCD) Area to Alternate Carbohydrate Area (ACD).

This modification (originally permitted under SSM No. 089-25241-00203) to an existing major PSD stationary source is not major because:

(a) The emissions increase of each PSD regulated pollutant, excluding GHGs, are less than the PSD significant thresholds; and

(b) The emissions increase of GHGs from this modification to an existing major PSD source are less than seventy-five thousand (75,000) tons of CO_2 equivalent (CO_2e) emissions per year.

(c) This modification to an existing major Emission Offset stationary source is not major because the emissions increase of VOC and NOx are less than the Emission Offset significant thresholds. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

Therefore, pursuant to 326 IAC 2-2 and 326 IAC 2-3, the PSD and Emission Offset requirements are not applicable to the units modified as part of the Conversion of Beta Cyclodextrin (BCD) Area to Alternate Carbohydrate Area in SSM No. 089-25241-00203.

Note: The PSD and Emission Offset minor limits for Unit IDs 127-28 B, 127-29-B, and 127-30-B are no longer necessary and are being removed from the permit.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source (updated).

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 250
NO_x	Greater than 250
VOC	Greater than 250
CO	Greater than 250
Single HAP	Greater than 10
Total HAP	Greater than 25

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.

(a) The potential to emit (as defined in 326 IAC 2-7-1(30)) of PM10, PM2.5, SO2, NOx, VOC, and CO is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(30)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(30)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

Potential to Emit After Issuance

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 Operating Permit Renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	PM	PM_{10}	$PM_{2.5}$	SO_2	VOC	CO	NO_X
General Plant (includes stack emissions and uncaptured emissions)	3.52	0.70	0.17	453.52	3.42	7.49	-
Feed Pile - Wind Erosion	0.47	0.24	0.04	-	-	-	-
Material Transfer	0.13	0.06	0.01	-	-	-	-
Alternate Carbohydrate Area	0.37	0.37	0.37	-	-	-	-
Tanks (93-18-S)	-	-	-	2.26	-	-	-
Grind & Feedhouse	52.64	51.57	51.57	9.85	84.15	117.56	44.40
Utility	2.24	8.94	8.94	0.71	6.47	98.83	223.55
Refinery	36.44	36.76	36.76	0.03	45.77	12.03	5.67
Starch Production	56.35	59.24	59.24	0.30	401.67	308.91	50.67
Starch Warehouse	7.21	6.84	6.54	-	8.22	-	-

Process/ Emission Unit	PM	PM_{10}	$PM_{2.5}$	SO_2	VOC	CO	NO_X
Channel 3 Refinery	4.00E-04	1.68E-04	1.68E-04	-	-	-	-
Silos 140-08-G and 140-09-G (new)	**24.00**	**14.02**	**9.64**	**-**	**-**	**-**	**-**
Diesel-Fired Emergency Generator 93-41-S (new)	**0.27**	**0.27**	**0.27**	**0.25**	**3.84**	**0.31**	**0.83**
Gas-Fired Emergency Generators (Generac and Honda (new))	**0.01**	**0.01**	**0.01**	**0.01**	**0.14**	**0.06**	**0.11**
Six (6) Torpedo Heaters (new)	**0.07**	**0.08**	**0.07**	**2.33**	**0.01**	**0.16**	**0.66**
Total	**183.71**	**179.09**	**173.62**	**469.27**	**549.94**	**545.88**	**330.03**
Title V Major Source Thresholds	NA	100	100	100	100	100	100
PSD Major Source Thresholds	250	250	NA	250	250	250	250
Nonattainment NSR Major Source Thresholds	NA	NA	NA	NA	100	NA	100

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 (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.

(a) This stationary source is major for PSD because the emissions of at least one attainment pollutant are greater than two hundred fifty (>250) tons per year, and is not one of the twenty-eight (28) listed source categories. The source status remains unchanged as a result of this modification.

(b) This stationary source is major for Emission Offset because the emissions of the VOC and NOx are greater than one hundred (>100) tons per year. The source status remains unchanged as a result of this modification.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS):

(a) This source is subject to the New Source Performance Standards for Industrial-Commercial-Institutional Steam Generating Units (40 CFR 60, Subpart Db), which is incorporated by reference as 326 IAC 12. The unit subject to this rule include the following:

(1) Natural gas-fired Package Boiler #1 (Unit ID 89-03-U), installed in 2006, with a maximum heat input capacity of 247 million Btu/hr, and exhausting to stack S89-03-U. Under NSPS 40 CFR 60, Subpart Db, Package Boiler #1 is a steam-generating unit with a heat input capacity greater than 100 million Btu/hr.

Nonapplicable portions of the NSPS will not be included in the permit. This source is subject to the following portions of Subpart Db:

(1) 40 CFR 60.40b (a) and (j)
(2) 40 CFR 60.41b
(3) 40 CFR 60.44b (a)(1), (h), and (i)
(4) 40 CFR 60.46b (a) and (e)(1)
(5) 40 CFR 60.48b (b)(1), (c), (d), (e)(2)(3), and (f)
(6) 40 CFR 60.49b (a)(1)(3), (b), (d), (g), (i), (o), (v), and (w)

(b) The propylene oxide tanks (identified as 93-18-S) 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 (326 IAC 12), since each has a storage capacity greater than 75 m^3 (19,812 gallons), is used to store volatile organic liquids (VOL), and was constructed after July 23, 1984.

Nonapplicable portions of the NSPS will not be included in the permit. The tanks are subject to the following portions of Subpart Kb.

(1) 40 CFR 60.110b(a)
(2) 40 CFR 60.111b
(3) 40 CFR 60.112b(a)(3)
(4) 40 CFR 60.113b(c)
(5) 40 CFR 60.115b(c)
(6) 40 CFR 60.116b(a), (b), (c), and (e)(3)(i)

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, are not included in the permit for the Steephouse - Grind 1, Bldg 128 Tank Farm, or HCl Tank Refinery because none of these tanks store volatile organic compounds as defined in 40 CFR 51.100.

(c) The source is subject to the New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines (326 IAC 12, 40 CFR 60, Subpart IIII) for the proposed 496 HP emergency generator 93-41-S, with a displacement of less than 30 liters per cylinder, and constructed after July 11, 2005.

The two gasoline-fired generators (Generac GP5000 and Honda EU7000) are spark ignition engines, and therefore are not subject to 40 CFR 60, Subpart IIII.

The following emission unit is subject to the NSPS, 40 CFR 60, Subpart IIII:

One (1) diesel-fired emergency generator, identified as 93-41-S, approved in 2016 for construction, with a rating of 496 HP, manufactured after 2009.

Nonapplicable portions of the NSPS will not be included in the permit. The emergency generator 93-41-S is subject to the following portions of 40 CFR 60, Subpart IIII (included as Attachment E to the permit).

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

(d) The source is subject to the New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines (326 IAC 12, 40 CFR 60, Subpart JJJJ) for the proposed gasoline fired emergency generators (Generac GP5000 and Honda EU7000) which are spark-ignition engines, each with a displacement of less than 30 liters per cylinder and maximum engine power of less than 25 HP, manufactured after July 1, 2008.

The following emission units are subject to the NSPS, Subpart JJJJ:

(1) One (1) gasoline-fired emergency generator, identified as Generac Model GP5000 (manufactured in 2009, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.16 MMBtu/hr (22.9 HP).

(2) One (1) gasoline-fired emergency generator, identified as Honda EU7000 (manufactured in 2014, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.1 MMBtu/hr (14.3 HP).

Nonapplicable portions of the NSPS will not be included in the permit. The emergency generators Generac GP5000 and Honda EU7000 are subject to the following portions of 40 CFR 60, Subpart JJJJ (included as Attachment G to the permit):

(1) 40 CFR 60.4230(a)(6)
(2) 40 CFR 60.4233(a)
(3) 40 CFR 60.4234
(4) 40 CFR 60.4235
(5) 40 CFR 60.4236(a), (d)
(6) 40 CFR 60.4243(a), (d)
(7) 40 CFR 60.4245
(8) 40 CFR 60.4246
(9) 40 CFR 60.4248
(10) Table 3

(e) This source is not subject to the requirements of the New Source Performance Standard for Grain Elevators, 40 CFR 60, Subpart DD, because the permanent storage capacity of the corn elevator does not exceed 35,200 m^3 (ca. 1 million bushels).

National Emission Standards for Hazardous Air Pollutants (NESHAP):

(a) The propylene oxide tanks (identified as 93-18-S) are subject to the National Emission Standards for Hazardous Air Pollutants for Organic Liquids Distribution, 40 CFR 63,

Subpart EEEE, which is incorporated by reference as 326 IAC 20-83 because it is considered an organic liquids distribution operation at a major source of HAPs.

The units subject to this rule are the following:

(1) One (1) 28,000 gallon horizontal propylene oxide tank (Unit ID 93-18-S), installed in 1988, with 95% efficient vapor recovery (liquid nitrogen condenser).

(2) One (1) propylene oxide tank, approved in 2015 for construction, identified as 93-18-S, with a maximum capacity of 28,000 gallons, equipped with a thermal oxidizer (CE93-41-S). This tank also provides propylene oxide to other starch processes.

Nonapplicable portions of the NESHAP will not be included in the permit. Tank 93-18-S is subject to the following portions of 40 CFR 63, Subpart EEEE:

(1) 40 CFR 63.2330
(2) 40 CFR 63.2334(a)
(3) 40 CFR 63.2338(a), (b)(c)(2), (d), (e)
(4) 40 CFR 63.2342(a), (d)
(5) 40 CFR 63.2346(a)(1),(2),(c), (e) and (i)
(6) 40 CFR 63.2350
(7) 40 CFR 63.2354(a)(1),(2),(b) ,(c)
(8) 40 CFR 63.2358(a),(b)(2)
(9) 40 CFR 63.2362(a)
(10) 40 CFR 63.2366
(11) 40 CFR 63.2370
(12) 40 CFR 63.2374
(13) 40 CFR 63.2378(a), and (c)
(14) 40 CFR 63.2382(a), (b)(2), (c), (d)(1),(2)(i),(ii),(iii),(iv),(vi)
(15) 40 CFR 63.2386(a), (b), (c)(1-7), (8)(i),(ii), (d)(1), (2)(i), and (e)
(16) 40 CFR 63.2390(b) and (d)
(17) 40 CFR 63.2394
(18) 40 CFR 63.2396(a)
(19) 40 CFR 63.2398
(20) 40 CFR 63.2402
(21) 40 CFR 63.2406
(22) Table 2, Items 4.a., 9.b.
(23) Table 3, Item 1
(24) Table 4, Items 1 and 4
(25) Table 5, Item 1
(26) Table 6
(27) Table 7, Items 3.a, 4
(28) Table 8, Items 1,2
(29) Table 10, Items 5 and 6
(30) Table 11
(31) Table 12

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 EEEE.

(b) This source is subject to the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR 63, Subpart DDDDD), which is incorporated by reference as 326 IAC 20-95.

The following unit is subject to this rule:

(1) Natural gas-fired Package Boiler #1 (Unit ID 89-03-U), installed in 2006, with a maximum heat input capacity of 274 million Btu/hr, and exhausting to stack S89-03-U. Under NSPS 40 CFR 60 Subpart Db, Package Boiler #1 is a steam-generating unit with a heat input capacity greater than 100 million Btu/hr.

Nonapplicable portions of the NESHAP will not be included in the permit. The emission unit is subject to the following portions of 40 CFR 63, Subpart DDDDD

(1) 40 CFR 63.7480
(2) 40 CFR 63.7485
(3) 40 CFR 63.7490(a)(1), (d)
(4) 40 CFR 63.7495(b), (d)
(5) 40 CFR 63.7499(l)
(6) 40 CFR 63.7500(a)(1), (3)
(7) 40 CFR 63.7501
(8) 40 CFR 63.7505(a)
(9) 40 CFR 63.7515(e)
(10) 40 CFR 63.7540(a)(10), (b)
(11) 40 CFR 63.7545(a), (b)
(12) 40 CFR 63.7550(a), (b), (c), (d)
(13) 40 CFR 63.7555(a)
(14) 40 CFR 63.7560
(15) 40 CFR 63.7565
(16) 40 CFR 63.7570
(17) 40 CFR 63.7575
(18) Table 3
(19) Table 9
(20) Table 10

(c) This source is subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (326 IAC 20, 40 CFR 63, Subpart ZZZZ) for the three (3) emergency generators: 93-41-S, Honda EU7000, and the Generac GP5000, each classified as a new unit constructed after July 12, 2006, located at a major source for HAPs, and each with a rating below 500 brake HP.

The following units are subject to this rule:

(1) One (1) diesel-fired emergency generator, identified as 93-41-S, approved in 2016 for construction, with a rating of 496 HP, manufactured after 2009.

(2) One (1) gasoline-fired emergency generator, identified as Generac Model GP5000 (manufactured in 2009, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.16 MMBtu/hr (22.9 HP).

(3) One (1) gasoline-fired emergency generator, identified as Honda EU7000 (manufactured in 2014, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.1 MMBtu/hr (14.3 HP).

Nonapplicable portions of the NESHAP will not be included in the permit. The emergency generators are subject to the following portions of 40 CFR 63, Subpart ZZZZ (included as Attachment F).

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585(a) and (b)
(3) 40 CFR 63.6590(a)(2)(ii), (c)(6)
(4) 40 CFR 63.6595(a)(5)
(5) 40 CFR 63.6605
(6) 40 CFR 63.6665
(7) 40 CFR 63.6670

(8) 40 CFR 63.6675

Compliance Assurance Monitoring (CAM):

(d) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each new or modified emission unit that meets the following criteria:

(1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

CAM Applicability Analysis for $PM/PM_{10}/PM_{2.5}$							
Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Applicable** (Y/N)	**Large Unit** (Y/N)
Alternate Carbohydrate Area							
127-30-B	dust collector	Y	0.10	0.001	100	N	N
127-28-B	dust collector	Y	0.10	0.001	100	N	N
127-29-B	dust collector	Y	0.10	0.001	100	N	N
127-21-B	dust collector	Y	13.52	0.14	100	N	N
127-22-B	dust collector	Y	13.52	0.14	100	N	N
Grind and Feedhouse Area							
121-01-G	wet scrubber	Y	>100	<100	100	Y	N
89-01-G	scrubber	Y	83.78	8.38	100	N	N
124A-01-G	**scrubber**	**Y**	**>100**	**<100**	**100**	**Y**	**N**
200-07-G	dust collector	Y	7.11	0.07	100	N	N
200-01-G	dust collector	Y	1.33	0.01	100	N	N
200-02-G	dust collector	Y	1.33	0.01	100	N	N
200-06-G	dust collector	Y	7.11	0.07	100	N	N
200-04-G	dust collector	Y	19.90	0.20	100	N	N
200-03-G	dust collector	Y	19.90	0.20	100	N	N
200-05-G	**dust collector**	**Y**	**532.07**	**5.33**	**100**	**Y**	**N**
140-05-G	**filter baghouse**	**Y**	**5,631.43**	**5.63**	**100**	**Y**	**N**
140-07-G	filter baghouse	Y	37.54	0.38	100	N	N
140-01-G	**bin vent**	**Y**	**150.17**	**1.50**	**100**	**Y**	**N**
140-02-G	**bin vent**	**Y**	**150.17**	**1.50**	**100**	**Y**	**N**
140-03-G	**bin vent**	**Y**	**150.17**	**1.50**	**100**	**Y**	**N**
140-04-G	**bin vent**	**Y**	**150.17**	**1.50**	**100**	**Y**	**N**
33-01-G	bin vent	Y	75.09	0.75	100	N	N
33-02-G	bin vent	Y	71.06	0.71	100	N	N
140-06-G	baghouse	Y	67.58	0.68	100	N	N
33-03-G	filter baghouse	Y	82.59	0.83	100	N	N
140-08-G	**baghouse**	**Y**	**>100**	**<100**	**100**	**Y**	**N**
140-09-G	**baghouse**	**Y**	**>100**	**<100**	**100**	**Y**	**N**
Refinery Area							
100-03-R	**wet**	**Y**	**1,745.41**	**17.45**	**100**	**Y**	**N**

CAM Applicability Analysis for $PM/PM_{10}/PM_{2.5}$							
Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Applicable** (Y/N)	**Large Unit** (Y/N)
	scrubber						
100-01-R	**wet wcrubber**	**Y**	**1,447.28**	**14.47**	**100**	**Y**	**N**
104-01-R	**scrubber**	**Y**	**>100**	**<100**	**100**	**Y**	**N**
104-02-R	scrubber	Y	67.45	0.67	100	N	N
104-03-R	baghouse	Y	19.13	0.19	100	N	N
104-05-R	baghouse	Y	35.20	0.35	100	N	N
104-08-R	bin vent filter	Y	<100	<100	100	N	N
104-09-R	dust collector	Y	<100	<100	100	N	N
Starch Production Area							
34-01-S	dust collector	Y	19.54	0.20	100	N	N
34-02-S	dust collector	Y	78.39	0.78	100	N	N
34-03-S	dust collector	Y	18.55	0.19	100	N	N
34-05-S	dust collector	Y	49.74	0.49	100	N	N
34B-13-S	dust collector	Y	29.36	0.29	100	N	N
34B-04-S	dust collector	Y	78.39	0.78	100	N	N
34B-01-S	dust collector	Y	18.24	0.18	100	N	N
34B-03-S	dust collector	Y	49.74	0.50	100	N	N
34B-05-S	dust collector	Y	13.27	0.13	100	N	N
34B-06-S	dust collector	Y	13.27	0.13	100	N	N
48-09-S	**dust collector**	**Y**	**112.63**	**1.13**	**100**	**Y**	**N**
59-03-S	**wet scrubber**	**Y**	**>100**	**<100**	**100**	**Y**	**N**
125-01-S	**wet scrubber**	**Y**	**>100**	**<100**	**100**	**Y**	**N**
128-01-S	**cyclone**	**Y**	**>100**	**<100**	**100**	**Y**	**N**
128-07-S	thermal oxidizer	N	<100	<100	100	N	N
128-08-S	thermal oxidizer	N	<100	<100	100	N	N
128-09-S	thermal oxidizer	N	<100	<100	100	N	N
128-10-S	thermal oxidizer	N	<100	<100	100	N	N
128-11-S	thermal oxidizer	N	<100	<100	100	N	N
128-12-S	thermal oxidizer	N	<100	<100	100	N	N
128-13-S	thermal oxidizer	N	<100	<100	100	N	N
128-25-S	dust collector	Y	<100	<100	100	N	N
128-26-S	dust collector	Y	<100	<100	100	N	N
120-01-S	**dust collector**	**Y**	**244.36**	**2.44**	**100**	**Y**	**N**
120-02-S	**dust collector**	**Y**	**244.36**	**2.44**	**100**	**Y**	**N**
120-03-S	**dust collector**	**Y**	**244.36**	**2.44**	**100**	**Y**	**N**
120-04-S	**dust**	**Y**	**244.36**	**2.44**	**100**	**Y**	**N**

CAM Applicability Analysis for $PM/PM_{10}/PM_{2.5}$							
Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Applicable** (Y/N)	**Large Unit** (Y/N)
	collector						
120-05-S	**dust collector**	**Y**	**244.36**	**2.44**	**100**	**Y**	**N**
120-06-S	**dust collector**	**Y**	**244.36**	**2.44**	**100**	**Y**	**N**
120-07-S	**dust collector**	**Y**	**244.36**	**2.44**	**100**	**Y**	**N**
120-08-S	**dust collector**	**Y**	**244.36**	**2.44**	**100**	**Y**	**N**
120-09-S	**dust collector**	**Y**	**244.36**	**2.44**	**100**	**Y**	**N**
120-10-S	**dust collector**	**Y**	**244.36**	**2.44**	**100**	**Y**	**N**
120-11-S	**dust collector**	**Y**	**244.36**	**2.44**	**100**	**Y**	**N**
120-12-S	**dust collector**	**Y**	**244.36**	**2.44**	**100**	**Y**	**N**
120-13-S	**dust collector**	**Y**	**244.36**	**2.44**	**100**	**Y**	**N**
120-14-S	**dust collector**	**Y**	**244.36**	**2.44**	**100**	**Y**	**N**
120-15-S	**dust collector**	**Y**	**244.36**	**2.44**	**100**	**Y**	**N**
120-16-S	**dust collector**	**Y**	**244.36**	**2.44**	**100**	**Y**	**N**
120-17-S	**dust collector**	**Y**	**244.36**	**2.44**	**100**	**Y**	**N**
126-01-S	dust collector	Y	70.56	0.71	100	N	N
126-02-S	dust collector	Y	70.56	0.71	100	N	N
126-03-S	dust collector	Y	70.56	0.71	100	N	N
126-04-S	dust collector	Y	70.56	0.71	100	N	N
130-01-S	**dust collector**	**Y**	**183.45**	**1.84**	**100**	**Y**	**N**
130-02-S	**dust collector**	**Y**	**183.45**	**1.84**	**100**	**Y**	**N**
130-03-S	**dust collector**	**Y**	**183.45**	**1.84**	**100**	**Y**	**N**
130-04-S	**dust collector**	**Y**	**183.45**	**1.84**	**100**	**Y**	**N**
130-05-S	**dust collector**	**Y**	**108.53**	**1.09**	**100**	**Y**	**N**
Starch Warehouse Area							
93-32-W	dust collector	Y	<100	<100	100	N	N
93-33-W	dust collector	Y	<100	<100	100	N	N
93-34-W	dust collector	Y	<100	<100	100	N	N
93-35-W	dust collector	Y	<100	<100	100	N	N
93-37-W	dust collector	Y	<100	<100	100	N	N
93-36-W	dust collector	Y	<100	<100	100	N	N
93-38-W	dust collector	Y	<100	<100	100	N	N
93-04-W	baghouse	Y	30.03	0.30	100	N	N
93-05-W	baghouse	Y	28.94	0.29	100	N	N

CAM Applicability Analysis for $PM/PM_{10}/PM_{2.5}$							
Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Applicable** (Y/N)	**Large Unit** (Y/N)
93-08-W	baghouse	Y	36.18	0.36	100	N	N
93-09-W	dust collector	Y	43.41	0.43	100	N	N
93-10-W	dust collector	Y	43.41	0.43	100	N	N
93-14-W	**baghouse**	**Y**	**119.39**	**1.19**	**100**	**Y**	**N**
93-15-W	dust collector	Y	9.04	0.09	100	N	N
93-16-W	**baghouse**	**Y**	**113.60**	**1.14**	**100**	**Y**	**N**
93-17-W	**baghouse**	**Y**	**231.54**	**2.32**	**100**	**Y**	**N**
93-18-W	dust collector	Y	<100	<100	100	N	N
93-39-W	dust collector	Y	<100	<100	100	N	N
93-40-W	dust collector	Y	17.84	0.36	100	N	N

CAM Applicability Analysis for SO_2							
Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Applicable** (Y/N)	**Large Unit** (Y/N)
Wastewater Treatment Process							
Wastewater Treatment Process 800-04-E	biogas flare	Y	-	83.85	100	N	N
Grind and Feedhouse Area							
121-01-G	wet scrubber	N	21.10	4.22	100	N	N
89-01-G	scrubber	Y	19.55	3.91	100	N	N
124A-01-G	scrubber	N	7.44	1.51	100	N	N
Refinery Area							
104-01-R	scrubber	Y	0.03	0.03	100	N	N
Starch Production Area							
59-03-S	wet scrubber	N	0.06	0.06	100	N	N
125-01-S	wet scrubber	N	0.16	0.16	100	N	N
128-01-S	wet scrubber	N	0.08	0.08	100	N	N

*Note - No other units have SO_2 control devices.

CAM Applicability Analysis for VOC							
Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Applicable** (Y/N)	**Large Unit** (Y/N)
Wastewater Treatment Process							
Wastewater Treatment Process 800-04-E	biogas flare	N	170.82	3.42	100	N	N
Grind and Feedhouse Area							
121-01-G	wet scrubber	Y	28.51	14.26	100	N	N
89-01-G	wet scrubber	Y	51.17	25.59	100	N	N
124A-01-G	wet scrubber	Y	36.49	18.24	100	N	N

CAM Applicability Analysis for VOC							
Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Applicable** (Y/N)	**Large Unit** (Y/N)
Refinery Area							
100-01-R	wet scrubber	Y	47.22	23.61	100	N	N
100-03-R	wet scrubber	Y	17.70	8.85	100	N	N
Starch Production Area							
59-03-S	**wet scrubber**	**Y**	**125.31**	**62.66**	**100**	**Y**	**N**
125-01-S	**wet scrubber**	**Y**	**131.09**	**65.55**	**100**	**Y**	**N**
128-01-S	wet scrubber	Y	2.15	1.07	100	N	N
128-07-S	**thermal oxidizer PK9030**	**Y**	**>100**	**<100**	**100**	**Y**	**N**
128-08-S	**thermal oxidizer PK9030**	**Y**	**>100**	**<100**	**100**	**Y**	**N**
128-09-S	**thermal oxidizer PK9030**	**Y**	**>100**	**<100**	**100**	**Y**	**N**
128-10-S	**thermal oxidizer PK9030**	**Y**	**>100**	**<100**	**100**	**Y**	**N**
128-11-S	**thermal oxidizer PK9030**	**Y**	**>100**	**<100**	**100**	**Y**	**N**
128-12-S	**thermal oxidizer PK9030**	**Y**	**>100**	**<100**	**100**	**Y**	**N**
128-13-S	**thermal oxidizer PK9030**	**Y**	**>100**	**<100**	**100**	**Y**	**N**

*Note - No other units have VOC control devices.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the proposed units - corn silos 140-08-G and 140-09-G controlled by baghouses CE140-08-G and CE140-09-G for PM, PM-10, and PM2.5 upon issuance of the next Title V Renewal. A CAM plan must be submitted as part of the next Renewal application. CAM Plans for existing units subject to CAM were previously incorporated into Part 70 Operating Permit Renewal No. T089-27009-00203.

State Rule Applicability Determination

Consent Decree Limitations

Pursuant to the Consent Decree entered by the United States District Court for the District of Minnesota on March 3, 2006 in United States v. Cargill, Inc. No. 05-2037 (D.Minn.), the Permittee shall comply with the following emission limitations:

Emission Source Description	EU or Emission Point ID	VOC (lb/hr)	CO (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)
Batch Scale Hopper #1	34-01-S	0.07	-	-	-

Emission Source Description	EU or Emission Point ID	VOC (lb/hr)	CO (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)
Dextrin Starch Reactor #1	34-02-S	0.27	-	-	-
Dextrin Starch Cooler #1	34-03-S	0.06	-	-	-
Surge Hopper #1	34-05-S	0.17	-	-	-
Dextrin Starch Cooler #2	34B-01-S	0.06	-	-	-
Surge Hopper #2	34B-03-S	0.17	-	-	-
Dextrin Starch Reactor #2	34B-04-S	0.27	-	-	-
Dextrin Feed Hopper #3 (System #2)	34B-05-S	0.02	-	-	-
Dextrin Feed Hopper #4 (System #2)	34B-06-S	0.02	-	-	-
Batch Scale Hopper #2	34B-13-S	0.10	-	-	-
Dextrin Bulk loading Equipment	48-09-S	0.39	-	-	-
Starch Ring Dryer #2	59-03-S	1.19	19.00	-	-
Dried Corn Syrup Conveying System	93-04-W	0.03	-	-	-
Corn Syrup Solids Conveying System	93-05-W	0.03	-	-	-
Frodex Semi-Bulk Packing System	93-08-W	0.03	-	-	-
Cornstarch Bag Dumping Station #1	93-09-W	0.02	-	-	-
Cornstarch Bag Dumping Station #2	93-10-W	0.02	-	-	-
Starch Bulk Loading	93-14-W	0.09	-	-	-
Starch Bulk loading Vacuum System	93-15-W	0.01	-	-	-
Starch Mixing and Bagging System #1	93-16-W	0.05	-	-	-
Starch Mixing and Bagging System #2	93-17-W	0.10	-	-	-
P.G. Starch Receiver	93-18-W	0.13	-	-	-
Channel 2 Receiver	93-32-W	0.08	-	-	-
Channel 3 Receiver	93-33-W	0.08	-	-	-
Channel 4 Receiver	93-34-W	0.08	-	-	-
Channel 6 Receiver	93-35-W	0.06	-	-	-
Channel 2/3 Packing	93-36-W	0.39	-	-	-
Channel 4/6 Packing	93-37-W	0.39	-		-
Central Vacuum System	93-38-W	0.02	-	-	-
P.G. Starch Packing	93.39-W	0.05	-	-	-
Corn Syrup Spray Dryer/Cooler System #3	100-01-R	0.50	1.00	-	-
Corn Spray Dryer #4	100-03-R	0.86	1.00	-	-
Activated Carbon Regeneration Furnace #2	104-01-R	10 ppm or 95% destruction	100 ppm or 90% destruction	0.11	5.0
Cornstarch Storage Bin #20	120-01-S	0.05	-	-	-
Cornstarch Storage Bin #21	120-02-S	0.05	-	-	-
Cornstarch Storage Bin #22	120-03-S	0.05	-	-	-
Cornstarch Storage Bin #23, including Starch Milling	120-04-S	0.05	-	-	-

Emission Source Description	EU or Emission Point ID	VOC (lb/hr)	CO (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)
System #1 and Starch Milling System #2					
Cornstarch Storage Bin #24	120-05-S	0.05	-	-	-
Cornstarch Storage Bin #25	120-06-S	0.05	-	-	-
Cornstarch Storage Bin #26	120-07-S	0.05	-	-	-
Cornstarch Storage Bin #27	120-08-S	0.05	-	-	--
Cornstarch Storage Bin #28	120-09-S	0.05	-	-	-
Cornstarch Storage Bin #29	120-10-S	0.05	-	-	-
Cornstarch Storage Bin #30	120-11-S	0.05	-	-	-
Cornstarch Storage Bin #31	120-12-S	0.05	-	-	-
Cornstarch Storage Bin #32	120-13-S	0.05	-	-	-
Cornstarch Storage Bin #33	120-14-S	0.05	-	-	-
Cornstarch Storage Bin #34	120-15-S	0.05	-	-	-
Cornstarch Storage Bin #35	120-16-S	0.05	-	-	-
Cornstarch Storage Bin #36	120-17-S	0.05	-	-	-
Fiber Drying Equipment	89-01-G	10.57	-	3.95	-
Gluten Dryer System	121-01-G	3.72	2.95	0.68	-
Germ Dryer/Cooler	124A-01-G	3.97	0.46	0.77	-
Starch Ring Dryer #3	125-01-S	0.86	6.00	-	-
Waxy Cornstarch Bulk Storage Bins #95	126-01-S	0.18	-	-	-
Waxy Cornstarch Bulk Storage Bins #96	126-02-S	0.18	-	-	-
Waxy Cornstarch Bulk Storage Bins #97	126-03-S	0.18	-	-	-
Waxy Cornstarch Bulk Storage Bins #98	126-04-S	0.18	-	-	-
Sp. Starch Process with Starch Ring Dryer #4	128-01-S	0.90	6.00	-	-
Thermal Oxidizer	S128-14-S	1.33	8.61	-	-
Cornstarch Blending System #1	130-01-S	0.04	-	-	-
Cornstarch Blending System #2	130-02-S	0.04	-	-	-
Cornstarch Blending System #3	130-03-S	0.04	-	-	-
Cornstarch Blending System #4	130-04-S	0.04	-	-	-
Dextrin Blender	130-05-S	0.09	-	-	-
Germ Tank 1310	200-01-G	0.16	-	-	-
Gluten Tank 1410	200-02-G	0.16	-	-	-
Germ Tank 1110	200-03-G	0.16	-	-	-
Gluten Tank 1010	200-04-G	0.16	-	-	-
Bulk Loadout	200-05-G	3.89	-	-	-
Biogas Flare	800-04-E	0.78	1.71	-	-
HCL Tank - Refinery		0.08	-	-	-
Bldg 128 Tank Farm		0.08	-	-	-
3 Gluten Filters		0.42	-	-	-
3 Gluten Vacuum Pumps		0.77	-		-
Refinery Vacuum Pumps (1-3)		0.43	-	-	-
Refinery Vacuum Pumps (4-		0.64	-	-	-

Emission Source Description	EU or Emission Point ID	VOC (lb/hr)	CO (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)
6)					
Refinery Vacuum Pumps (7-8)		0.64	-	-	-
WWTP Centrifuges (2)		0.04	-	-	-

326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset)

This source is a major stationary source under 326 IAC 2-2 and 326 IAC 2-3 because it has the potential to emit two hundred fifty (250) tons per year or more of an air pollutant subject to PSD regulation under the CAA, and greater than 100 tons per year for an air pollutant subject to Emission Offset rules. The following conditions are necessary in order to keep the provisions of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable (Note: Lake County was nonattainment for PM2.5 standard prior to February 6, 2012, and the PM2.5 emissions limitations for avoiding the requirements of 326 IAC 2-1.1-5 have been retained).

The following emissions limitations are applicable to existing emissions units:

Wastewater Treatment Process

1. All biogas shall either be combusted for energy recovery in a plant process or combusted in the Biogas Flare (Unit ID 800-04-E) such that H_2S emissions shall be limited to less than ten (10) tons per twelve (12) consecutive month period. Compliance with the above limit shall limit H_2S emissions from the anaerobic wastewater treatment process to less than ten (10) tons per twelve (12) consecutive month period and render 326 IAC 2-2 not applicable.

2. All biogas shall either be combusted for energy recovery in a plant process or combusted in the Biogas Flare (Unit ID 800-04-E) such that SO_2 emissions shall be limited to less than forty (40) tons per twelve (12) consecutive month period. Compliance with the above limit shall limit SO_2 emissions from the anaerobic wastewater treatment process to less than forty (40) tons per twelve (12) consecutive month period and render 326 IAC 2-2 not applicable.

Alternate Carbohydrate Area

1. The PM, PM10 and PM2.5 emissions from the following operations shall not exceed the emissions limits listed in the table below:

Unit	Unit ID	PM/PM10/PM2.5 Emission Limit (lb/hr)
No. 1 Alternate Carbohydrate Storage Bin	127-28-B	0.18
No. 2 Alternate Carbohydrate Storage Bin	127-29-B	0.18
Alternate Carbohydrate Mill Feed Hopper	127-30-B	0.028

Compliance with these limits in conjunction with the PM, PM10 and PM2.5 limits in Condition D.3.1, will assure that the PM emissions from Significant Source Modification No. 089-25241-00203 are less than 25 tons per twelve (12) consecutive month period, PM10 emissions from Significant Source Modification No. 089-25241-00203 are less than 15 tons per twelve (12) consecutive month period and PM2.5 emissions from Significant Source Modification No. 089-

25241-00203 are less than 10 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-2 (PSD) are rendered not applicable.

Corn Syrup Solids Manufacturing System #5

The unrestricted potential to emit of Significant Source Modification No. 089-29467-00203 was greater than fifteen (15) tons of PM_{10} per year and ten (10) tons of $PM_{2.5}$ per year, therefore source elected to limit the potential to emit of this modification as follows:

Equipment Description	Stack ID	PM10 Emission Limit (lb/hr)	PM2.5 Emission Limit (lb/hr)
Corn Syrup Solids Manufacturing System #5	stack S93-40-W	3.31	2.17

Compliance with these emission limits will assure that the potential to emit from this modification is less than fifteen (15) tons of PM_{10} per year, and less than ten (10) tons of $PM_{2.5}$ per year; and therefore will render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

Grind and Feedhouse Area

(a) The PM**,** PM10 and PM2.5 emissions from the following operations shall not exceed the emissions limits listed in the tables below:

Unit	Unit ID	Control Device ID	PM/PM10 Emission Limit (lb/hr)	PM2.5 Emission Limit (lb/hr)
Storage Bin No. 5 (Grind 1)	33-01-G	CE33-01-G	0.171	0.029
Storage Bin No. 6 (Grind 2)	33-02-G	CE33-02-G	0.171	0.029
Corn Cleaner	33-03-G	CE33-03-G	0.21	0.036
Fiber Dryer	89-01-G	CE-89-01-G	3.746	0.633
No. 1 Gluten Dryer	121-01-G	CE121-01-G	2.245	0.382
Storage Bin #3	140-03-G	CE140-03-G	0.343	0.058
Storage Bin #4	140-04-G	CE140-04-G	0.343	0.058
Storage Bin #1	140-01-G	CE140-01-G	0.343	0.058
Storage Bin #2	140-02-G	CE140-02-G	0.343	0.058
Corn Dump Pit	140-05-G	CE140-05-G	1.286	0.219
Gravity Take-Up Conveyor	140-06-G	CE140-06-G	0.154	0.026
Corn Elevator Conveying	140-07-G	CE140-07-G	0.086	0.015
Germ Tank 1310	200-01-G	CE200-01-G	0.05	0.009
Gluten Tank 1410	200-02-G	CE200-02-G	0.05	0.009
Germ Tank 1110	200-03-G	CE200-03-G	0.05	0.009
Gluten Tank 1010	200-04-G	CE200-04-G	0.05	0.009
Bulk Loadout	200-05-G	CE200-05-G	1.21	0.206
Corn Screening Silo	200-06-G	CE200-06-G	0.05	0.009
Central Vacuum Loadout	200-07-G	CE200-07-G	0.02	0.003

(b) In order to render the requirements of 326 IAC 2-2 not applicable the PM, PM10 and PM2.5 emissions from each of the corn silos 140-08-G and 140-09-G shall be limited as follows:

Unit	Unit ID	Control Device ID	PM Emission Limit (lb/hr)	PM10 Emission Limit (lb/hr)	PM2.5 Emission Limit (lb/hr)
Corn Silo	140-08-G	CE140-08-G	2.74	1.6	1.1
Corn Silo	140-09-G	CE140-09-G	2.74	1.6	1.1

Compliance with these emission limits, in combination with the potential to emit of PM, PM10 and PM2.5 of the emergency generator 93-41-S, will ensure that the potential to emit from this modification (SSM No. 089-36416-00203) is less than twenty-five (25) tons of PM per year, less than fifteen (15) tons of PM_{10} per year, ten (10) tons of direct $PM_{2.5}$ per year, and therefore will render the requirements of 326 IAC 2-2 not applicable.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The operation of this facility 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. Therefore, 326 IAC 2-4.1 would apply to the facility, however, pursuant to 326 IAC 2-4.1-1(a), because this facility was constructed before July 27, 1997, the requirements of 326 IAC 2-4.1 do not apply. Since July 27, 1997 the source has not had any modifications with emissions that were greater than ten (10) tons per year for a single HAP or greater than twenty-five (25) tons per year for a combination of HAPs. The source has chosen to limit the emissions of single and combination HAPs for of these modifications to below ten (10) and twenty-five (25) tons per year. Therefore, 326 IAC 2-4.1 does not apply to any of the modifications isssued since July 27, 1997.

326 IAC 2-6 (Emission Reporting)
Since this source is located in Lake County, and has a potential to emit NO_X and VOC greater than or equal to twenty-five (25) tons per year, an emission statement covering the previous calendar year must be submitted by July 1 of each year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 1-5-2 (Emergency Reduction Plans)
The source is subject to 326 IAC 1-5-2 because it has the potential to emit one hundred (100) tons per year of a pollutant and shall prepare, and submit to the commissioner, for approval, written emergency reduction plans consistent with safe operating procedures.

326 IAC 4-1 (Open Burning)
The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3 and 326 IAC 4-1-4. 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.

326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 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 (20%) 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.

326 IAC 6.8-8 (Lake County: Continuous Compliance Plan)
Pursuant to 326 IAC 6.8-8-1, which lists Cargill, Inc., the Permittee shall submit to IDEM and maintain at the source a copy of the Continuous Compliance Plan, and include documentation of operation and maintenance practices of process operations and any particulate matter control equipment existing or required to be installed, replaced, or improved by 326 IAC 6.8-7 that are

essential to maintaining compliance with the mass and opacity limits specified in 326 IAC 5-1, 326 IAC 6.8-2, and 326 IAC 6.8-3. The Permittee shall perform the inspections, monitoring, and record keeping requirements as specified in 326 IAC 6.8-8-7. The Permittee shall update the CCP, as needed, retain a copy on site, and make the updated CCP available for inspection as specified in 326 IAC 6.8-8-8.

326 IAC 6.8-10 (Lake County: Fugitive Particulate Matter)
The Permittee has the potential to emit less than five (5) tons per year of fugitive particulate matter. Therefore, the requirements of 326 IAC 6.8-10 are not applicable.

326 IAC 6.8-11 (Lake County: Particulate Matter Contingency Measures)
This rule shall apply to the following sources of PM10 emissions located in Lake County: any source listed in 326 IAC 6.8-2. Cargill, Inc. is a listed source under 326 IAC 6.8-2. Pursuant to this rule, the Permittee shall comply with the applicable provisions of 326 IAC 6.8-11 (Lake County: Particulate Matter Contingency Measures).

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 Emissions Limitations)
Pursuant to 326 IAC 6-5-1(a), the requirements of this rule do not apply to sources located in Lake County.

326 IAC 2-7-6(5) (Annual Compliance Certification)
The U.S. EPA Federal Register 79 FR 54978 notice does not exempt Title V Permittees from the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D), but the submittal of the Title V annual compliance certification to IDEM satisfies the requirement to submit the Title V annual compliance certifications to EPA. IDEM does not intend to revise any permits since the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D) still apply, but Permittees can note on their Title V annual compliance certification that submission to IDEM has satisfied reporting to EPA per Federal Register 79 FR 54978. This only applies to Title V Permittees and Title V compliance certifications.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(c), emission units subject to PM limitations that are as stringent or more stringent under 326 IAC 6.8 are not subject to the requirements of 326 IAC 6-3-2.

326 IAC 7-4.1-5 (Sulfur Dioxide Limitations for Lake County)
Cargill, Inc. is a listed facility under 326 IAC 7-4.1.

Pursuant to 326 IAC 7-4.1-5 (Sulfur Dioxide Limitations), emissions of sulfur dioxide from the following units shall not exceed the following limitations:

Unit Name	Unit ID	PM Limit (lbs/hr)
Biogas Flare	800-04-E	9.13
Gluten Dryer System	121-01-G	0.68
Fiber Drying Equipment	89-01-G	3.95
Germ Dryer/Cooler	124A-01-G	0.77
Activated Carbon Regeneration Furnace #2	104-01-R	0.11

(b) Pursuant to 326 IAC 7-4.1-5(b) (Cargill, Inc. sulfur dioxide emission limitations), Cargill Inc. shall submit a quarterly report of the twelve (12) month rolling total of all sulfur dioxide emissions in tons per year.

326 IAC 8-7 (Specific VOC Reductions Requirements for Lake, Porter, Clark, and Floyd Counties)
Pursuant to 326 IAC 8-7-2(a), the requirements of this rule are applicable to sources in Lake County that have the potential to emit VOCs at levels greater than twenty-five (25) tons per year.

Pursuant to 326 IAC 8-7-3(2) and pursuant to Consent Decree entered by the United States District Court for the District of Minnesota on March 3, 2006 in United States v. Cargill, Inc. No. 05-2037 (D.Minn.):

(a) Emissions of VOC from the following units shall not exceed the following limitations:

Unit Name	Unit ID	VOC Limit (lbs/hr)
Gluten Dryer System	121-01-G	3.72
Germ Dryer/Cooler	124A-01-G	3.97
Steephouse – Grind 1	Bldg 23	0.0039 [1]
Corn Syrup Spray Dryer/Cooler System #3	100-01-R	0.50
Corn Syrup Spray Dryer #4	100-03-R	0.86
Cornstarch Storage Bin 20	120-01-S	0.05
Cornstarch Storage Bin 21	120-02-S	0.05
Cornstarch Storage Bin 22	120-03-S	0.05
Cornstarch Storage Bin 23	120-04-S	0.05
Cornstarch Storage Bin 24	120-05-S	0.05
Cornstarch Storage Bin 25	120-06-S	0.05
Cornstarch Storage Bin 26	120-07-S	0.05
Cornstarch Storage Bin 27	120-08-S	0.05
Cornstarch Storage Bin 28	120-09-S	0.05
Cornstarch Storage Bin 29	120-10-S	0.05
Cornstarch Storage Bin 30	120-11-S	0.05
Cornstarch Storage Bin 31	120-12-S	0.05
Cornstarch Storage Bin 32	120-13-S	0.05
Cornstarch Storage Bin 33	120-14-S	0.05
Cornstarch Storage Bin 34	120-15-S	0.05
Cornstarch Storage Bin 35	120-16-S	0.05
Cornstarch Storage Bin 36	120-17-S	0.05
Starch Ring Dryer #3	125-01-S	0.86
Starch Ring Dryer #4	128-01-S	0.90
Starch Reactors (4)	128-02-S thru 128-04-S & 128-07-S	0.06
Cornstarch Blending System 1	130-01-S	0.04
Cornstarch Blending System 2	130-02-S	0.04
Cornstarch Blending System 3	130-03-S	0.04
Cornstarch Blending System 4	130-04-S	0.04
Dextrin Blender	130-05-S	0.09
Batch Scale Hopper #1	34-01-S	0.07
Dextrin Starch Reactor #1	34-02-S	0.27
Dextrin Starch Cooler #1	34-03-S	0.06
Surge Hopper #1	34-05-S	0.17
Dextrin Feed Hopper #1	34-06-S	0.02
Dextrin Feed Hopper #2	34-07-S	0.02
Dextrin Starch Cooler #2	34B-01-S	0.06
Surge Hopper #2	34B-03-S	0.17
Dextrin Starch Reactor #2	34B-04-S	0.27
Dextrin Feed Hopper #3	34B-05-S	0.02
Dextrin Feed Hopper #4	34B-06-S	0.02

Unit Name	Unit ID	VOC Limit (lbs/hr)
Batch Scale Hopper #2	34B-13-S	0.10
Dextrin Bulk Loading	48-09-S	0.39
Starch Milling System #1	59-01-S	0.16
Starch Milling System #2	59-02-S	0.16
Starch Ring Dryer #2	59-03-S	1.19
Dried Corn Syrup Conveying System	93-04-W	0.03
Corn Syrup Solids Conveying System	93-05-W	0.03
Frodex Semi-Bulk Packing System	93-08-W	0.03
Cornstarch Bag Dumping Station #1	93-09-W	0.02
Cornstarch Bag Dumping Station #2	93-10-W	0.02
Starch Bulk Loading	93-14-W	0.09
Starch Bulk Loading Vacuum	93-15-W	0.01

1 – Units are lbs per bushel

Compliance with the above limits shall be achieved pursuant to the methods specified in 326 IAC 8-7-4.

State Rule Applicability - Individual Facilities

Alternate Carbohydrate Area

326 IAC 6.8-2 (Lake County: PM10 Emission Requirements)
Pursuant to 326 IAC 6.8-2 (Lake County: PM10 Emission Requirements), emissions of particulate matter less than ten microns in diameter (PM10) shall not exceed the emissions limits listed in the table below:

Unit ID	PM10 Limit (gr/dscf)	PM10 Limit (lbs/hr)
Alternate Carbohydrate Mill Feed Hopper (127-30-B)	0.01	0.028
No. 1 & No. 2 Alternate Carbohydrate Storage Bins (127-28-B) & (127-29-B)	0.01 each	0.18 each
Vacuum Cleaners #1 & #2 (127-21-B) & (127-22-B)	0.01 each	0.031 each

The dust collectors used for control shall be in operation at all times their associated units are in operation, in order to comply with these limits.

Grind and Feedhouse Area

<u>New Units: Corn Silos 140-08-G and 140-09-G</u>

326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County)
The proposed corn silos have the potential to emit particulate matter, and are located at a source in Lake County that has a potential to emit of particulate matter greater than 100 tons per year, and is not subject to a more stringent particulate limit under 326 IAC 12. Therefore, the requirements of 326 IAC 6.8 apply. Pursuant to 326 IAC 6-1-2(a), the particulate matter emissions shall not exceed 0.03 grain per dry standard cubic foot for each of these units.

The baghouses used for control shall be in operation at all times the associated corn silos are in operation, in order to comply with these limits.

326 IAC 6-1-2(h) (Particulate Matter Limitations for Lake County)
Pursuant to Significant Source Modification 089-14389-00203, issued September 2001, and 326

IAC 6-1-2(h) (Nonattainment Area Particulate Limitations), emissions of particulate matter from the following units shall not exceed the following limitations:

Unit ID	PM Limit (gr/dscf)	PM Limit (lbs/hr)
Central Vacuum Loadout (200-07-G)	0.005	0.02
Germ Tank 1310 (200-01-G)	0.005	0.05
Gluten Tank 1410 (200-02-G),	0.005	0.05
Corn Screenings Silo (200-06-G)	0.005	0.02
Gluten Tank 1010 (200-04-G)	0.005	0.05
Germ Tank 1110 (200-03-G)	0.005	0.05
Bulk Loadout (200-05-G)	0.005	1.21

The dust collectors used for control shall be in operation at all times their associated units are in operation, in order to comply with these limits.

326 IAC 6.8-2 (Particulate Matter less than 10 microns in diameter (PM10))
Pursuant to 326 IAC 6.8-2-8 (Lake County: PM10 Emission Requirements), emissions of particulate matter less than ten microns in diameter (PM10) shall not exceed the following:

Unit ID	PM10 Limit (gr/dscf)	PM10 Limit (lbs/hr)
Gluten Dryer System (121-01-G)	0.03	3.0
Fiber Drying Equipment (89-01-G)	0.01	4.5
Germ Dryer/Cooler (124A-01-G)	0.02	1.852
Corn Dump Pit (140-05-G)	0.01	1.286
Corn Elevator Conveying (140-07-G)	0.01	0.086
Corn Receiving and Storage Bins 1, 2, 3, & 4	0.02 each	0.343 each
Corn Receiving and Storage Day Tanks 5 & 6	0.02 each	0.171 each
Gravity Take-up Conveyor (140-06-G)	0.01	0.154
Corn Cleaner (33-03-G)	0.01	0.21

The proposed corn silos 140-08-G and 140-09-G in the grind and feedhouse area units are not listed facilities under 326 IAC 6.8-2.

Utility Area

326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County)
Pursuant to 326 IAC 6.8-1-2(b)(3), Package Boiler #1 shall burn natural gas only and particulate matter emissions shall not exceed 0.01 grains per dry standard cubic foot (dscf). Package Boiler #1 is a natural gas fired boiler and has a potential to emit of particulate emissions less than 0.01 grains per dry standard cubic foot (dscf); therefore, it can comply with this limit.

326 IAC 7-4.1-1 (Lake County Sulfur Dioxide Emission Limitations)
The Package Boiler #1 has a potential to emit of less than twenty-five (25) tons per year and ten (10) pounds per hour of sulfur dioxide. Therefore, 326 IAC 7-4.1-1 does not apply.

326 IAC 10 (Nitrogen Oxide Rules)
The Package Boiler #1 is not a blast furnace gas fired boiler or located in Clark or Floyd Counties or an electricity generating unit as defined under 326 IAC 10-4-2(16). Therefore, 326 IAC 10 does not apply.

Refinery Area

326 IAC 6.8-2 (Particulate Matter less than 10 microns in diameter (PM10))
Pursuant to 326 IAC 6.8-2-8 (Lake County: PM10 Emission Requirements), emissions of particulate matter less than ten microns in diameter (PM10) shall be limited to the following:

Unit ID	PM10 Limit (gr/dscf)	PM10 Limit (lbs/hr)
Corn Syrup Spray Dryer #4 (100-03-R)	0.01	4.2
Corn Syrup Spray Dryer/Cooler System #3 (100-01-R)	0.015	4.96
Activated Carbon Regeneration Furnace #2 (104-01-R)	0.015	0.728
Liquid Soda Ash Tank (104-02-R)	0.02	0.154
Filter Aid Hopper (104-03-R)	0.02	0.044
Sodium Bisulfite Bag Dump (104-05-R)	0.02	0.080

The scrubbers and dust collectors used for control shall be in operation at all times the associated units are in operation, in order to comply with these limits.

326 IAC 6-1-2(h) (Particulate Matter Limitations for Lake County)
Pursuant to CP 089-1230-00203, issued November 1998, and 326 IAC 6-1-2(h) (Nonattainment Area Particulate Limitations), emissions of particulate matter shall be limited to the following:

Unit ID	PM Limit (gr/dscf)	PM Limit (lbs/hr)
Diatomaceous Earth Unloading Silo (104-08-R)	0.01	0.064
Citric Acid Dump Station (104-09-R)	0.01	0.026

The bin vent filters and dust collectors used for control shall be in operation at all times their associated units are in operation, in order to comply with these limits.

Starch Production Area

326 IAC 6.8-2 (Particulate Matter less than 10 microns in diameter (PM10))
Pursuant to 326 IAC 6.8-2-8 (Lake County: PM10 Emission Requirements, emissions of particulate matter less than ten microns in diameter (PM10) shall be limited to the following.

Unit ID	PM10 Limit (gr/dscf)	PM10 Limit (lbs/hr)
Batch Scale Hopper #1 (34-01-S)	0.01	0.04
Dextrin Starch Reactor #1 (34-02-S)	0.01	0.180
Dextrin Starch Cooler #1 (34-03-S)	0.01	0.042
Surge Hopper #1 (34-05-S)	0.01	0.11
Dextrin Feed Hoppers #1 and #2 (34-06-S & 34-07-S)	0.01 each	0.030 each
Batch Scale Hopper #2 (34B-13-S)	0.01	0.067
Dextrin Starch Reactor #2 (34B-04-S)	0.01	0.179
Dextrin Starch Cooler #2 (34B-01-S)	0.01	0.042
Surge Hopper #2 (34B-03-S)	0.01	0.114
Dextrin Feed Hoppers #3 and #4 (34B-05-S & 34B-06-S)	0.01 each	0.030 each
Dextrin Bulk Loading Equipment (48-09-S)	0.01	0.26
Starch Ring Dryer #2 (59-03-S)	0.006	3.50

Starch Milling Systems #1 and #2 (59-01-S and 59-02-S)	0.01 each	0.43 each
Starch Ring Dryer #3 (125-01-S)	0.006	3.50
Special Starch Process / Starch Ring Dryer #4 (128-01-S)	0.01	3.5
Cornstarch Storage Bins 20-36 (120-01-S to 120-17-S)	0.01 each	0.56 each
Waxy Cornstarch Storage Bins 95-98 (126-01-S to 126-04-S)	0.01 each	0.16 each
Cornstarch Blending Systems 1-4 (130-01-S to 130-04-S)	0.01	0.42
Dextrin Blender (130-05-S)	0.01	0.248

The dust collectors and scrubbers used for control shall be in operation at all times their associated units are in operation, in order to comply with these limits.

326 IAC 6-1-2(h) (Particulate Matter Limitation for Lake County)
Pursuant to CP 089-01531-00203, issued November 1999, and 326 IAC 6-1-2(h) (Non-attainment Area Particulate Limitations), emissions of particulate matter shall be limited to the following.

Unit ID	PM Limit (gr/dscf)	PM Limit (lbs/hr)
Sodium Sulfate Storage Bin (128-25-S)	0.005	0.03
Sodium Sulfate Weigh Bin (128-26-S)	0.005	0.03

The dust collectors used for control shall be in operation at all times their associated units are in operation, in order to comply with these limits.

326 IAC 7-4.1-1 (Lake County Sulfur Dioxide Emission Limitations)
The Starch Ring Dryer #2, Starch Ring Dryer #3, Special Starch Process/Starch Ring Dryer #4, and Reactors #2 through #8 each have a potential to emit of less than twenty-five (25) tons per year and ten (10) pounds per hour of sulfur dioxide. Therefore, 326 IAC 7-4.1-1 does not apply.

Starch Warehouse Area

326 IAC 6.8-1-2(a) (Particulate Matter Limitations for Lake County)
Pursuant to 326 IAC 6.8-1-2(a), particulate matter (PM) emissions from the Corn Syrup Solids Manufacturing System #5 (Unit ID 93-40-W) shall not exceed three-hundredths (0.03) grain per dry standard cubic foot (dscf).

326 IAC 6-1-2(h) (Particulate Matter Limitations for Lake County)
Pursuant to Minor Source Modification 089-12593-00203, issued September 2000, and 326 IAC 6-1-2(h) (Non-attainment Area Particulate Limitations), emissions of particulate matter from the following units shall be limited to the following:

Unit ID	PM Limit (gr/dscf)	PM Limit (lbs/hr)
Channel 2 Receiver (93-32-W)	0.005	0.10
Channel 3 Receiver (93-33-W)	0.005	0.10
Channel 4 Receiver (93-34-W)	0.005	0.10
Channel 6 Receiver (Dextrin) (93-35-W)	0.005	0.10
Channel 4/6 Packing (Dextrin)(93-37-W)	0.005	0.51
Channel 2/3 Packing (93-36-W)	0.005	0.51
Central Vacuum System (93-38-W)	0.005	0.02
P.G. Starch Receiver (93-18-W)	0.01	0.343
P.G. Starch Packing (Unit ID 93-39-W)	0.01	0.13

The dust collectors used for control shall be in operation at all times their associated units are in operation, in order to comply with these limits.

326 IAC 6.8-2 (Particulate Matter less than 10 microns in diameter (PM10))
Pursuant to 326 IAC 6.8-2-8 (Lake County PM10 Emission Requirements), emissions of particulate matter less than ten microns in diameter (PM10) from the following units shall be limited to the following:

Unit ID	PM10 Limit (gr/dscf)	PM10 Limit (lbs/hr)
Dried Corn Syrup (Frodex) Conveying System (93-04-W)	0.01	0.069
Corn Syrup Solids Conveying System (93-05-W)	0.01	0.066
Frodex Semi-bulk Packing System (93-08-W)	0.01	0.083
Cornstarch Bag Dump Stations 1 & 2 (93-09-W and 93-10-W)	0.01 each	0.10 each
Starch Bulk Loading (93-14-W)	0.01	0.273
Starch Bulk Loading Vacuum Cleanup System (93-15-W)	0.01	0.021
Starch Mixing and Bulk Bagging System #1 (93-16-W)	0.01	0.130
Starch Mixing and Bulk Bagging System #2 (93-17-W)	0.01	0.264

The dust collectors used for control shall be in operation at all times their associated units are in operation, in order to comply with these limits.

Emergency Generator 93-41-S

326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County)
The proposed emergency generator has the potential to emit particulate matter, and is located at a source in Lake County that has a potential to emit of particulate matter greater than 100 tons per year, and is not subject to a more stringent particulate limit under 326 IAC 12. Therefore, the requirements of 326 IAC 6.8 apply. Pursuant to 326 IAC 6-1-2(a), the particulate matter emissions shall not exceed 0.03 grain per dry standard cubic foot.

326 IAC 7-4.1-1 (Lake County Sulfur Dioxide Emission Limitations)
The new emergency generator has a potential to emit of less than twenty-five (25) tons per year and ten (10) pounds per hour of sulfur dioxide. Therefore, 326 IAC 7-4.1-1 does not apply.

326 IAC 8-7 (Specific VOC Reductions Requirements for Lake, Porter, Clark, and Floyd Counties)
Pursuant to 326 IAC 8-7-2(b), the emergency generator, is an exempt emission unit listed under 326 IAC 8-7-1(a)(2). Therefore, the VOC emissions limitations under 326 IAC 8-7-3 do not apply.

326 IAC 9 (Carbon Monoxide Emission Rules)
The emergency generator is not of the type affected by the requirements of this rule as listed under 326 IAC 9-1-2. Therefore, the CO emissions limitations do not apply.

Emergency Generator Generac GP5000

326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County)
The proposed emergency generator has the potential to emit particulate matter, and is located at a source in Lake County that has a potential to emit of particulate matter greater than 100 tons per year, and is not subject to a more stringent particulate limit under 326 IAC 12. Therefore, the requirements of 326 IAC 6.8 apply. Pursuant to 326 IAC 6-1-2(a), the particulate matter emissions shall not exceed 0.03 grain per dry standard cubic foot.

326 IAC 7-4.1-1 (Lake County Sulfur Dioxide Emission Limitations)
The new emergency generator has a potential to emit of less than twenty-five (25) tons per year and ten (10) pounds per hour of sulfur dioxide. Therefore, 326 IAC 7-4.1-1 does not apply.

326 IAC 8-7 (Specific VOC Reductions Requirements for Lake, Porter, Clark, and Floyd Counties)
Pursuant to 326 IAC 8-7-2(b), the emergency generator, is an exempt emission unit listed under 326 IAC 8-7-1(a)(2). Therefore, the VOC emissions limitations under 326 IAC 8-7-3 do not apply.

326 IAC 9 (Carbon Monoxide Emission Rules)
The emergency generator is not of the type affected by the requirements of this rule as listed under 326 IAC 9-1-2. Therefore, the CO emissions limitations do not apply.

Emergency Generator Honda EU7000

326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County)
The proposed emergency generator has the potential to emit particulate matter, and is located at a source in Lake County that has a potential to emit of particulate matter greater than 100 tons per year, and is not subject to a more stringent particulate limit under 326 IAC 12. Therefore, the requirements of 326 IAC 6.8 apply. Pursuant to 326 IAC 6-1-2(a), the particulate matter emissions shall not exceed 0.03 grain per dry standard cubic foot.

326 IAC 7-4.1-1 (Lake County Sulfur Dioxide Emission Limitations)
The new emergency generator has a potential to emit of less than twenty-five (25) tons per year and ten (10) pounds per hour of sulfur dioxide. Therefore, 326 IAC 7-4.1-1 does not apply.

326 IAC 8-7 (Specific VOC Reductions Requirements for Lake, Porter, Clark, and Floyd Counties)
The emergency generator, is an exempt emission unit listed under 326 IAC 8-7-1(a)(2). Therefore, the VOC emissions limitations under 326 IAC 8-7-3 do not apply.

326 IAC 9 (Carbon Monoxide Emission Rules)
The emergency generator is not of the type affected by the requirements of this rule as listed under 326 IAC 9-1-2. Therefore, the CO emissions limitations do not apply.

Six (6) Torpedo Heaters

326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County)
The six (6) Torpedo Heaters each have the potential to emit particulate matter, and are located at a source in Lake County that has a potential to emit of particulate matter greater than 100 tons per year, and is not subject to a more stringent particulate limit under 326 IAC 12. Therefore, the requirements of 326 IAC 6.8 apply. Pursuant to 326 IAC 6-1-2(a), the particulate matter emissions from each heater, shall not exceed 0.03 grain per dry standard cubic foot.

326 IAC 7-4.1-1 (Lake County Sulfur Dioxide Emission Limitations)
The six (6) Torpedo Heaters each have a potential to emit of less than twenty-five (25) tons per year and ten (10) pounds per hour of sulfur dioxide. Therefore, 326 IAC 7-4.1-1 does not apply.

326 IAC 8-7 (Specific VOC Reductions Requirements for Lake, Porter, Clark, and Floyd Counties)
Pursuant to 326 IAC 8-7-2(b), the Torpedo Heaters are exempt emission units listed under 326 IAC 8-7-1(a)(2). The VOC emissions limitations under 326 IAC 8-7-3 do not apply.

326 IAC 9 (Carbon Monoxide Emission Rules)
The Torpedo Heaters are not of the type affected by the requirements of this rule as listed under 326 IAC 9-1-2. Therefore, the CO emissions limitations do not apply.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance

Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The Compliance Determination Requirements applicable to this modification are as follows:

(a) In order to demonstrate compliance with the Consent Decree entered by the United States District Court for the District of Minnesota on March 3, 2006 in United States v. Cargill, Inc. No. 05-2037 (D.Minn.), and requirements under 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties), the Permittee shall perform VOC testing on the following units utilizing methods as approved by the Commissioner.

Emission Source Description	EU or Emission Point ID
Starch Ring Dryer #2	59-03-S
Corn Syrup Spray Dryer/Cooler System #3	100-01-R
Corn Spray Dryer #4	100-03-R
Fiber Drying Equipment	89-01-G
Gluten Dryer System	121-01-G
Germ Dryer/Cooler	124A-01-G
Starch Ring Dryer #3	125-01-S
Sp. Starch Process with Starch Ring Dryer #4	128-01-S
Thermal Oxidizer	S128-14-S
3 Gluten Filters	
3 Gluten Vacuum Pumps	
HCL Tank - Refinery	
Bldg 128 Tank Farm	

In order to demonstrate compliance with Conditions D.0.1 and D.6.3, the Permittee shall perform VOC testing on thermal oxidizer S128-14-S 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 testing required by this condition.

(b) In order to demonstrate compliance with the Consent Decree entered by the United States District Court for the District of Minnesota on March 3, 2006 in United States v. Cargill, Inc. No. 05-2037 (D.Minn.), the Permittee shall perform CO testing on the following units utilizing methods as approved by the Commissioner.

Emission Source Description	EU or Emission Point ID
Thermal Oxidizer	S128-14-S
Activated Carbon Regeneration Furnace #2	104-01-R

In order to demonstrate compliance with Conditions D.0.1, the Permittee shall perform CO testing on thermal oxidizer S128-14-S 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 testing required by this condition.

(c) In order to demonstrate compliance with the Consent Decree entered by the United States District Court for the District of Minnesota on March 3, 2006 in United States v. Cargill, Inc. No. 05-2037 (D.Minn.), the Permittee shall perform SO_2 testing on the following units utilizing methods as approved by the Commissioner.

Emission Source Description	EU or Emission Point ID
Fiber Drying Equipment	89-01-G
Gluten Dryer System	121-01-G
Germ Dryer/Cooler	124A-01-G
Activated Carbon Regeneration Furnace #2	104-01-R

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 testing required by this condition.

(d) In order to assure compliance with PSD Minor limitations, the biogas stream from anaerobic reaction shall be diverted to an active plant process burner or to the biogas flare at all times that a biogas stream is being generated.

(e) In order to assure compliance with PSD and Nonattainment NSR minor limitations, the bag filter dust collectors for PM and PM10 control in the Alternate Carbohydrate Area shall be in operation and control emissions from their associated facilities at all times that the facilities are in operation.

(f) In order to demonstrate compliance with PSD, Nonattainment NSR minor limitation requirements and 326 IAC 6.8, the Permittee shall perform PM and PM-10 testing on the Gluten Ring Dryer (121-01-G), 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 includes filterable and condensible PM.

(g) In order to demonstrate compliance with PSD, and Nonattainment NSR minor requirements, the Permittee shall perform PM and PM10 testing for the Scrubber (CE89-01-G) controlling the Fiber Dryer (89-01-G) 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 includes filterable and condensible PM.

(h) In order to assure compliance with emissions limitations for PM, PM10, and PM2.5, the control devices for PM, PM10, and PM2.5 control at the Grind and Feedhouse Area shall

be in operation and control emissions from their associated facilities at all times that the facilities are in operation.

(i) In order to demonstrate compliance with 326 IAC 6.8 for the Refinery Area, the Permittee shall perform PM-10 testing of the Corn Syrup Spray Dryer #4 (100-03-R) and the Corn Syrup Spray Dryer/Cooler System #3 (100-01-R) 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 includes filterable and condensible PM.

(j) In order to assure compliance with 326 IAC 6.8, the control devices for PM and PM10 control shall be in operation and control emissions from each facility at the Refinery Area at all times that the facility is in operation.

(k) In order to demonstrate compliance with 326 IAC 6.8, the Permittee shall perform PM-10 testing of the Starch Ring Dryer #2 (59-03-S), Starch Ring Dryer #3 (125-01-S), and the Special Starch Process w/ Starch Ring Dryer #4 (128-01-S) 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 includes filterable and condensible PM.

(l) In order to demonstrate compliance with 326 IAC 6.8, the Permittee shall perform PM10 and VOC testing for the Corn starch Storage Bin 23 dust collector (120-04-S), 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 includes filterable and condensible PM.

(m) The thermal oxidizer for VOC control for Reactors 2, 3, 4 and 7 shall be installed, calibrated, maintained, and operated, at a minimum, according to the manufacturer's specifications and recommendations.

(n) In order to assure compliance with 326 IAC 8-7 for the Starch Production Area, the thermal oxidizer (S128-14-S) shall be in operation and control emissions from Reactors 2, 3, 4, and/or 7 (128-07-S through 128-09-S and 128-12-S) at all times propylene oxide is being added to special starch Reactors 2, 3, 4, and/or 7 (128-07-S through 128-09-S and 128-12-S).

(o) In order to assure compliance with 326 IAC 6.8, the control devices for PM and PM10 control at the Starch Production Area shall be in operation and control emissions from each facility at all times that the facility is in operation.

(p) In order to assure compliance with PSD, Nonattainment Minor limitations and 326 IAC 6.8, the control devices for PM and PM10 control at the Starch Warehouse Area shall be in operation and control emissions from each facility at all times that the facility is in operation.

The following requirements are applicable to all multi-compartment baghouses:

(q) 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.

The compliance monitoring requirements applicable to this modification are as follows:

To demonstrate compliance with the Consent Decree entered by the United States District Court for the District of Minnesota on March 3, 2006 in United States v. Cargill, Inc. No. 05-2037 (D.Minn.), the following requirements are applicable:

(a) Desorption inlet temperature shall be measured with a thermocouple located in the inlet of the desorption zone.

(b) The accuracy of the thermocouple shall be verified by a second, or redundant, thermocouple probe inserted at the inlet to the desorption zone. This validation check will be conducted annually. The acceptance criterion is ±30°F. Alternatively, the thermocouple can be recalibrated annually. The minimum tolerance of the thermocouple is ±4°F or ±0.75% of the temperature, whichever is greater.

(c) The three (3) hour average temperature shall be calculated as the average of the readings (except that the average need only be calculated if readings occur below the specified temperature level).

(d) The temperature shall be monitored continuously and the temperature recorded at least once every fifteen (15) minutes (a minimum of four (4) equally spaced readings per hour).

(e) An excursion is defined as a three (3) hour period during which the average temperature measured is lower than the specified indicator value as determined in the most recent valid compliance stack test. The three (3) hour average temperature will be calculated when the temperature recorder indicates readings below the specified temperature.

If a condition exists which would result in response steps, the Permittee shall take reasonable response steps. Section C - Response to Excursion or Exceedances contains the Permittee's obligations with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

(f) The Permittee shall monitor and record the recirculation water flow rate (if applicable) and pH of the scrubbing liquid for the wet gas scrubbers associated with units 89-01-G, 121-01-G, 124A-01-G, and 104-01-R at least once per day when the process is in operation. The Permittee shall maintain the flow rate at or above the minimum in the table below. When for any one reading, the flow rate is below the above mentioned minimum, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A reading that is below the above mentioned minimum flow rate is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Scrubber ID	Minimum Flow Rate of Scrubbing Liquor (gallons/minute)	pH of Scrubbing Liquor
CE89-01-G	400	7.0
CE121-01-G	N/A	5.5
CE124A-01-G	N/A	5.5
CE104-01-R	N/A	7.0

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

(g) The Permittee shall perform bimonthly sampling of the biogas generated by the anaerobic digester. Samples shall be analyzed for H2S and SO2 content and H2S and SO2 emissions calculated using the following mass balance equations:

$$H2Ss\left({}^{lb}/_{hr}\right) * CE = H2S\left({}^{lb}/_{hr}\right) * 8760\left({}^{hr}/_{yr}\right) * \frac{1\ ton}{2000\ lb} = H2S\left({}^{ton}/_{yr}\right)$$

$$\left[H2S\left({}^{lb}/_{hr}\right) * \frac{MWSO2}{MWH2S}\right] + SO2s = SO2\left({}^{lb}/_{hr}\right) * 8760\left({}^{hr}/_{yr}\right) * \frac{1\ ton}{2000lb} = SO2\left({}^{ton}/_{yr}\right)$$

Where:
$H2S_s$ = The H2S emissions from the sample in pounds per hour.
CE = The control efficiency/ rate at which the flare converts H2S to SO2 is 99.9%.
MWH2S = The molecular weight of H2S is 34.08.
MWSO2 = The molecular weight of SO2 is 64.06.
SO2s = The SO2 emissions from the sample in pounds per hour.

(h) The Permittee shall monitor and record the flame presence for the Biogas Flare once during each shift of operation that the biogas stream is venting to the flare. The flame presence shall be determined using either a thermal sensor or flame detector at the point of the flame.

(i) The Permittee shall record the pressure drop across all baghouses or dust collectors used in conjunction with each Alternate Carbohydrate Area facility at least once per day when the associated facilities are in operation. When for any one reading, the pressure drop across the dust collector is outside of the normal range, the Permittee shall take reasonable response steps. The normal ranges for these units are the following unless a different upper-bound or lower bound values for these ranges are 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range ("H_2O)
Alternate Carbohydrate Mill Feed Hopper (127-30-B)	Dust Collector	0.1 - 6
No. 1 &No. 2 Alternate Carbohydrate Storage (127-28-B) & (127-29-B)	Dust Collector	0.1 – 6 each
Vacuum Cleaners #1 & #2 (127-21-B) & (127-22-B)	Dust Collector	0.1 – 6 each

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.

(j) The Permittee shall record the pressure drop across each particulate control device used in the Grind and Feedhouse Area at least once per day when the associated system is in operation. When for any one reading, the pressure drop across the control device is outside of the normal range, the Permittee shall take reasonable response steps. The normal ranges for these units are the following unless a different upper-bound or lower bound values for these ranges are 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Central Vacuum Loadout (200-07-G)	Dust Collector	0.1 - 6
Germ Tank 1310 (200-01-G)	Dust Collector	0.1 - 6
Gluten Tank 1410 (200-02-G)	Dust Collector	0.1 - 6
Corn Screenings Silo (200-06-G)	Dust Collector	0.1 - 6
Gluten Tank 1010 (200-04-G)	Dust Collector	0.1 - 6
Germ Tank 1110 (200-03-G)	Dust Collector	0.1 - 6
Corn Elevator Conveying (140-07-G)	Dust Collector	0.1 - 6
Gravity Take-up Conveyor (140-06-G)	Dust Collector	0.1 - 6
Corn Silo (140-08-G)	Baghouse	0.1-6
Corn Silo (140-09-G)	Baghouse	0.1-6
Corn Cleaner (33-03-G)	Dust Collector	0.1 - 6

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.

(k) The Permittee shall record the pressure drop across each particulate control device used in the Grind and Feedhouse Area at least once per day when the associated system is in operation. When for any one reading, the pressure drop across the control device is outside of the normal range, the Permittee shall take reasonable response steps. The normal ranges for these units are the following unless a different upper-bound or lower bound values for these ranges are 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Bulk Loadout (200-05-G)	Dust Collector	0.1 - 6
Corn Dump Pit (140-05-G)	Dust Collector	0.1 - 6

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.

(l) The Permittee shall record the pressure drop across each scrubber used in the Grind and Feedhouse Area, at least once per day when the associated system is in operation. When for any one reading, the pressure drop across a scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is as listed in table below 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 following range or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Fiber Drying Equipment (89-01-G)	Scrubber	0.1 - 6

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

(m) The Permittee shall record the pressure drop across each scrubber used in the Grind and Feedhouse Area, at least once per day when the associated system is in operation. When for any one reading, the pressure drop across a scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is as listed in table below 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Gluten Ring Dryer System (121-01-G)	Wet Scrubber	12 -19
Germ Dryer/Cooler (124A-01-G)	Scrubber	10-19

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

(n) In the event that a scrubber's failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have 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). Failure to take response steps shall be considered a deviation from this permit.

(o) The Permittee shall record the pressure drop across the control device used in conjunction with each Refinery Area facility as listed below, at least once per day, when the associated facility is in operation. When for any one reading, the pressure drop across the control device is outside of the normal range, the Permittee shall take reasonable response steps. The normal ranges for these units are the following unless a different upper-bound or lower bound values for these ranges are 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Filter Aid Hopper (104-03-R)	Dust Collector	0.1 - 6
Sodium Bisulfite Bag Dump (104-05-R)	Dust Collector	0.1 - 6
Diatomaceous Earth Unloading Silo (104-08-R)	Bin Vent Filter	0.1 - 6

Citric Acid Dump Station (Unit ID 104-09-R).	Dust Collector	0.1 - 6

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.

(p) The Permittee shall record the pressure drop across each scrubber used in the Refinery Area, at least once per day when the associated system is in operation. When for any one reading, the pressure drop across a scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is as listed in table below 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 following range or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Liquid Soda Ash Tank (104-02-R)	Wet Scrubber	0.25 – 10.0

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

(q) The Permittee shall record the pressure drop across each scrubber used in the Refinery Area, at least once per day when the associated system is in operation. When for any one reading, the pressure drop across a scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is as listed in table below 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 following range or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Corn Syrup Spray Dryer #4 (100-03-R)	Wet Scrubber	1.0 – 8.0
Corn Syrup Spray Dryer/Cooler System #3 (100-01-R)	Wet Scrubber	0.1 – 6.0
Activated Carbon Regeneration Furnace #2 (104-01-R)	Wet Scrubber	0.1 - 8.0

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

(r) The Permittee shall record the pressure drop across each control device used in the Starch Production Area at least once per day when the associated facility is in operation. When for any one reading, the pressure drop across the control device is outside of the normal ranges, the Permittee shall take reasonable response steps. The normal ranges for these units are the following unless a different upper-bound or lower bound values for these ranges are 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Batch Scale Hopper #1 (34-01-S)	Dust Collector	0.1 - 6
Dextrin Starch Reactor #1 (34-02-S)	Dust Collector	0.1 - 6
Dextrin Starch Cooler #1 (34-03-S)	Dust Collector	0.1 - 6
Surge Hopper #1 (34-05-S)	Dust Collector	0.1 - 6
Batch Scale Hopper #2 (34B-13-S)	Dust Collector	0.1 - 6
Dextrin Starch Reactor #2 (34B-04-S)	Dust Collector	0.1 - 6
Dextrin Starch Cooler #2 (34B-01-S)	Dust Collector	0.1 - 6
Surge Hopper #2 (34B-03-S),	Dust Collector	0.1 - 6
Dextrin Feed Hoppers #3 and #4 (34B-05-S & 34B-06-S)	Dust Collector	0.1 – 6 each
Sodium Sulfate Storage Bin (128-25-S)	Dust Collector	0.1 - 6
Sodium Sulfate Weigh Bin (128-26-S)	Dust Collector	0.1 - 6
Waxy Cornstarch Storage Bins 95-98 (126-01-S to 126-04-S)	Dust Collectors	0.1 - 6 each

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.

(s) The Permittee shall record the pressure drop across each control device used in the Starch Production Area at least once per day when the associated facility is in operation. When for any one reading, the pressure drop across the control device is outside of the normal range, the Permittee shall take reasonable response steps. The normal ranges for these units are the following unless a different upper-bound or lower bound values for these ranges are determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response required by this condition. A pressure reading that is outside the following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take a reasonable response shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Dextrin Bulk Loading Equipment (48-09-S)	Dust Collector	0.1 - 6
Cornstarch Storage Bins 20, 21, 22, 24-36 (120-01-S, 120-02-S, 120-03-S to 120-17-S), Corn starch Storage Bin 23, controlled by dust collector (120-04-S)	Dust Collectors	0.1 - 6 each
Cornstarch Blending Systems 1-4 (130-01-S to130-04-S)	Dust Collectors	0.1 - 6 each
Dextrin Blender (130-05-S)	Dust Collector	0.1 - 6

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.

(t) The Permittee shall record the pressure drop across each scrubber used in the Starch Production Area, at least once per day when the associated system is in operation. When for any one reading, the pressure drop across a scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is as listed in

table below 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Starch Ring Dryer #2 (59-03-S)	Wet Scrubber	1.0 – 11.0
Starch Ring Dryer #3 (125-01-S)	Wet Scrubber	5 - 17
Special Starch Process / Starch Ring Dryer #4 (128-01-S)	Wet Scrubber	0.1 - 10

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

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

(v) The flow of propylene oxide shall be automatically interrupted when that temperature falls below the temperature established during the most recent compliant stack test.

(w) 100% of the vapors, when using propylene oxide in starch Reactors 2, 3, 4, and/or 7, shall be captured and shall pass through the Thermal Oxidizer.

(x) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with limits in Condition D.6.3(a).

(y) 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, until more recent compliant stack test results are available, when using propylene oxide in starch reactors 2, 3, 4 and/or 7.

(Note: The 3-hour average temperature determined from the most recent valid stack test conducted on February 5, 2013 was 1392.33 °F).

(z) A temperature 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.

(aa) The Permittee shall record the pressure drop across the control device used in conjunction with each Starch Warehouse Area facility as listed below, at least once per day when the associated facility is in operation. When for any one reading, the pressure drop across the control device is outside of the normal range, the Permittee shall take reasonable response steps. The normal ranges for these units are the following unless a different upper-bound or lower bound values for these ranges are 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Channel 2 Receiver (93-32-W)	Dust Collector	0.1 - 6
Channel 3 Receiver (93-33-W)	Dust Collector	0.1 - 6
Channel 4 Receiver (93-34-W)	Dust Collector	0.1 - 6
Channel 6 Receiver (Dextrin) (93-35-W)	Dust Collector	0.1 - 6
Channel 4/6 Packing (Dextrin) (93-37-W)	Dust Collector	0.1 - 6
Channel 2/3 Packing (93-36-W)	Dust Collector	0.1 - 6
Central Vacuum System (93-38-W)	Dust Collector	0.1 - 6
Dried Corn Syrup (Frodex) Conveying System (93-04-W)	Dust Collector	0.1 - 6
Corn Syrup Solids Conveying System (93-05-W)	Dust Collector	0.1 - 6
Frodex Semi-bulk Packing System (93-08-W)	Dust Collector	0.1 - 6
Cornstarch Bag Dump Stations 1 & 2 (93-09-W and 93-10-W)	Dust Collectors	0.1 - 6 each
Starch Bulk Loading Vacuum Cleanup System (93-15-W)	Dust Collector	0.1 - 6
P.G. Starch Receiver (93-18-W)	Dust Collector	0.1 - 6
P.G. Starch Packing (Unit ID 93-39-W)	Dust Collector	0.1 - 6
Corn Syrup Solids Mfg System #5 (93-40-W)	Dust Collector	1.0 - 8.0

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.

(bb) The Permittee shall record the pressure drop across the control device used in conjunction with each Starch Warehouse Area facility as listed below, at least once per day when the associated facility is in operation. When for any one reading, the pressure drop across the control device is outside of the normal range, the Permittee shall take reasonable response steps. The normal ranges for these units are the following unless a different upper-bound or lower bound values for these ranges are 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Starch Bulk Loading (93-14-W)	Dust Collector	0.1 - 6
Starch Mix and Bulk Bag Systems 1 & 2 (93-16-W and 93-17-W)	Dust Collectors	0.1 - 6 each

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.

The following requirements are applicable to all single compartment baghouses:

(cc) 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).

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

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

The compliance requirements are necessary to demonstrate compliance with minor limitations under PSD (326 IAC 2-2, nonattainment NSR (326 IAC 2-1.1-5), Emission Offset rules (326 IAC 2-3), emissions limitations under 326 IAC 6.8 (Particulate Emissions Limitation in Lake County), Part 70 (326 IAC 2-7), and CAM (see Federal Rule Applicability Section for units subject to CAM).

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. T089-27009-00203. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

(a) Section A.1 has been revised to clarify the SIC code for the source.
(b) Sections A.2 and D.5 have been revised to add the two (2) proposed silos and two (2) bucket elevators to the grind and feedhouse area and to update the list of units in the Refinery Area. In addition, minor changes have been made to the descriptions of some emission units for clarification purposes. The biogas flare, which is identified erroneously as both Unit ID 800-05-E and 800-04-E has been identified as 800-04-E. The propylene oxide tank (Unit ID 93-18-S), installed in 1988, and Bldg 128 Tank Farm, installed in November 1999, which were removed from the permit in MSM 089-35720-00203 and SPM No. 089-35732-00203, have been added to Sections A.2, D.6 and E.3.
(c) Sections A.2 and D.3 have been revised to delete the requirements for all emission units approved in 2008 for construction (in SSM No. 089-25241-00203), because these units were not constructed, including No. 2 Gluten Dryer (Unit ID 121A-01-G); Germ Dryer/Cooler (Unit ID 203-01-G); No. 1 Bran Bunker (Unit ID 89-06-G); No. 2 Bran Bunker (Unit ID 89-07-G); Bran Conveyor System (Unit ID 89-08-G); Bran Preweigh Hopper (Unit ID 89-09-G).
(d) The emission units in Sections A.2 and the D Sections have been renumbered as a result of changes to the descriptions.
(e) The description of Package Boiler #1 has been revised throughout the permit to include the applicability of the NESHAP Subpart DDDDD.
(f) Section A.3 has been revised to delete insignificant activities no longer present on site.
(g) References to 326 IAC 2-7-5(15) for descriptive information have been updated to 326 IAC 2-7-5(14) throughout the permit.
(h) Section A.3 has been revised to add the three (3) emergency generators.
(i) Sections B and C have been revised to update the permit number, phone numbers, the numbering of listed conditions, references to rules, clarification purposes and changes to references to other conditions.
(j) The testing requirements in Conditions D.0.3, D.3.10, and D.6.5 have been revised for clarification purposes.
(k) Condition D.0.5 - Parametric Monitoring for scrubbers has been revised for clarification purposes.
(l) All references to 326 IAC 2-1.1-5 (Nonattainment NSR) have been replaced with 326 IAC 2-3 (Emission Offset).
(m) Condition D.1.3 - NSPS Subpart Db Testing Requirement has been deleted. Performance tests are not a requirement for natural gas-fired boilers under this NSPS.
(n) The one-time testing requirements in Conditions D.1.5 (biogas flare) and D.2.5 (Alternate Carbohydrate Storage Bins) have been deleted as these tests have been conducted already.

(o) Condition D.2.1 PM/PM10/PM2.5 PSD and Nonattainment NSR Minor Limit has been deleted, because these requirements are related to the SSM No. 089-25241-00203 and are no longer necessary.

(p) Condition D.2.3 - has been deleted because the associated units have been removed from the source. This included the BCD Reaction and Separation unit (Unit ID 127-03-B).

(q) The requirements for Visible Emissions notations in Conditions D.2.9, D.3.12, D.3.13, D.5.8, D.5.9, D.6.8, D.6.9, D.7.8, and D.7.9 have been deleted. IDEM, OAQ Compliance and Enforcement Branch has determined that the parametric monitoring requirements for the emission units are sufficient for assuring compliance. The recordkeeping requirements related to these conditions have been deleted.

(r) Condition D.3.1 - PM/PM10 and PM2.5 PSD and Nonattainment NSR Minor Limit [326 IAC 2-2 [326 IAC 2-1.1-5] has been deleted because these requirements are related to the SSM No. 089-25241-00203 and are no longer necessary.

(s) Condition D.3.2 - VOC Emission Offset [326 IAC 2-3] which required the shutdown of emission units at the source in order to assure SSM 089-25241-00203 was a minor modification under 326 IAC 2-3 has been deleted.

(t) Condition D.3.3 (renumbered as D.3.2) - Particulate Matter less than 10 microns in diameter (PM10) has been revised to correct a typographical error in the PM10 emissions limit (lb/hr) as included in 326 IAC 6.8-2-8.

(u) Condition D.3.4 (renumbered as D.3.3) Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6.8-2] has been revised to correct a typographical error.

(v) Condition D.3.5 (renumbered as D.3.4) - Particulate Matter Limitations for Lake County has been revised to include the PM limitation for the proposed corn silos. The proposed bucket elevators exhaust to existing stack 140-05-G, which already is subject to a PM limitation under 326 IAC 6.8. In addition, the PM emissions limitations for units that were permitted in 2008 (in SSM No. 089-25241-00203) but not constructed have been deleted.

(w) Condition D.3.6 (renumbered as D.3.5) - VOC Emissions has been revised to delete the reference to units that have already been shut down.

(x) Condition D.3.7 (renumbered as D.3.6) - Sulfur Dioxide Limitations for Lake County has been revised to correct a typographical error.

(y) Condition D.3.8 - SO2 Emissions [326 IAC 7-4.1] has been deleted because the affected emission units (permitted in 2008) were never constructed.

(z) Testing requirements in Condition D.3.10 (renumbered as D.3.8) have been revised to delete the testing requirements for No. 2 Gluten Dryer (121A-01-G) and the Germ Dryer/Cooler (203-01-G) which were permitted in 2008 but not constructed, and to delete the deadlines for the initial performance tests for certain other units, since those dates have been passed.

(aa) Condition D.3.11 (renumbered as D.3.9) - Particulate Matter has been revised to include the requirement for compliance with PM2.5 limitations, and to update the references to other condition numbers.

(bb) Condition D.3.14 (renumbered as D.3.10) - Parametric Monitoring has been modified to include the requirements for the baghouses for the proposed silos (CE140-08-G and 140-09-G).

(cc) Condition D.3.20 (renumbered as D.3.16) - Recordkeeping Requirements has been revised to update references to other D.1 conditions.

(dd) Condition D.3.21 (renumbered as D.3.17) - reporting Requirements has been revised to update a reference to a rule citation.

(ee) The parametric monitoring requirements for scrubbers and dust collectors in D sections have been updated for clarification purposes.

(ff) Condition D.4.2, which included shutdown requirements pursuant to 326 IAC 8-7 has been deleted. The Permittee has confirmed that the referenced units have been shut down.

(gg) Conditions D.5.3 and D.6.3 - VOC Emissions have been revised to delete shutdown requirements under 326 IAC 8-7. The Permittee has confirmed that the referenced units have been shut down.

(hh) Testing Requirements under Condition D.6.5 have been revised to delete the deadlines for the initial performance tests for certain units, since the initial compliance tests for those units have already been performed.

(ii) Condition D.6.11 - Parametric Monitoring (Thermal Oxidizer) has been revised to clarify the minimum temperature requirements for the thermal oxidizer S-128-14-S.

(jj) Section D.8 has been added to include the PM emissions limitations and Preventive Maintenance requirements for the three (3) emergency generators.

(kk) Sections E.1 through E.5 have been revised for clarification purposes and to correct typographical errors.

(ll) Conditions E.3.1 and E.4.1 have been revised to clarify that the required notifications and reports under NSPS and NESHAP rules need to be submitted to IDEM Compliance and Enforcement Branch only. EPA submissions are not necessary.

(mm) Sections E.5, E.6 and E.7 have been added to include the requirements under NSPS Subpart IIII, NESHAP Subpart ZZZZ, and NSPS Subpart JJJJ, respectively, which are applicable to some or all of the three (3) new emergency generators.

(nn) Recordkeeping and Reporting requirements have been revised to incorporate changes to requirements and to address renumbering of conditions.

(oo) The Table of Contents and references to conditions have been updated throughout the permit.

(pp) The Quarterly Report form for emission unit 203-01-G has been deleted because this unit, permitted in 2008, was never constructed.

(qq) The report forms have been updated with the new Renewal number and other changes of an administrative nature.

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 wet corn milling operation.

Source Address:	1100 Indianapolis Blvd., Hammond, Indiana IN 46320
General Source Phone Number:	(219) 659-2000
SIC Code:	2046 **(Wet Corn Milling)**
County Location:	Lake
Source Location Status:	Nonattainment for 8-hour ozone standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD and Emission Offset Rules Major Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

I. Anaerobic Wastewater Treatment Process

(a) One (1) anaerobic wastewater treatment process installed in July 1995. Biogas is generated in the wastewater treatment plant by anaerobic reaction. The biogas can be controlled by:

...

(2) One (1) Biogas Flare (Unit ID 800-~~05~~**04**-E), installed in July 1995. The biogas flare converts the hydrogen sulfide (H_2S) in the biogas to sulfur dioxide (SO_2). The biogas flare exhausts to stack ID S800-05-E.

...

III. Grind and Feedhouse Area

(f) Gluten Dryer System **equipped with an integral cyclone** (Unit ID 121-01-G), installed in March 1995. Gluten meal is fed to a 12.5 MMBtu/hr natural and bio gas-fired ring dryer at a maximum throughput of 15,800 lb/hr. Particulate emissions are controlled by wet scrubber (CE121-01-G) that exhausts to stack

S121-01-G.

~~(g) No. 2 Gluten Dryer (Unit ID 121A-01-G), approved for construction in 2008. Gluten meal is fed to a 17 MMBtu/hr natural and bio gas-fired ring dryer at a maximum throughput of 19,700 lb/hr. Particulate emissions are controlled by two (2) wet scrubbers operating in series, one venturi-type followed by one tray-type scrubber (collectively identified as Unit ID CE121A-01-G) that exhausts to stack S121A-01-G.~~

~~(h) One (1) Germ Dryer/Cooler (Unit ID 203-01-G), approved for construction in 2008. Corn germ is fed to a 30 MMBtu/hr natural and bio gas-fired germ dryer and cooler at a maximum throughput of 38,600 lb/hr. Particulate emissions are controlled by one (1) wet scrubber (Unit ID CE203-01-G) that exhausts to stack S203-01-G.~~

~~(i) No. 1 Bran Bunker (Unit ID 89-06-G), approved for construction in 2008, with a maximum throughput rate of 107,433 tons per year, using a bin vent filter (Unit ID CE089-06-G) with an outlet grain loading of 0.01 gr/dscf as control, and exhausting to stack S89-06-G.~~

~~(j) No. 2 Bran Bunker (Unit ID 89-07-G), approved for construction in 2008, with a maximum throughput rate of 107,433 tons per year, using a bin vent filter (Unit ID CE89-07-G) with an outlet grain loading of 0.01 gr/dscf as control, and exhausting to stack S89-07-G.~~

~~(k) One (1) Bran Conveyor System (Unit ID 89-08-G), approved for construction in 2008, with a maximum throughput rate of 107,433 tons per year, using existing scrubber CE89-01-G (constructed in 1995) as control, and exhausting to stack S89-01-G.~~

~~(l) One (1) Bran Preweigh Hopper (Unit ID 89-09-G), approved for construction in 2008, with a maximum throughput rate of 107,433 tons per year, using a bin vent filter (Unit ID CE89-09-G) with an outlet grain loading of 0.01 gr/dscf as control, and exhausting to stack S89-09-G.~~

(**g**~~m~~) Fiber Drying Equipment (Unit ID 89-01-G), installed in October 1995. Wet fiber is fed to this 78 MMBtu/hr natural gas-fired dryer at a maximum throughput of 79,695 lb/hr. Particulate matter is controlled by a scrubber (CE89-01-G) that exhausts to stack S89-01-G.

(~~n~~**h**) Germ Dryer/Cooler **equipped with an integral cyclone** (Unit ID 124A-01-G), installed in November 1994. Corn germ is fed to this 12.9 MMBtu/hr natural and bio gas-fired germ dryer and cooler at a maximum throughput of 16,580 lb/hr. Particulate emissions are controlled by one (1) scrubber (CE124A-01-G) that exhausts to stack S124A-01-G.

...

(~~cc~~**w**) Twenty-four (24) steep tanks (Unit ID Steephouse - Grind 1), consisting of 21 steep tanks installed prior to 1973 and 3 steep tanks installed in December 1995. The steep tanks contain a mildly acidic solution to soften the corn prior to milling. Tanks are individually vented and have only working/breathing losses.

(x) The following units, approved in 2016 for construction:

(1) Two (2) corn storage silos at the Corn Dump Pit and Receiving system, identified as 140-08-G and 140-09-G, each with a maximum throughput of 420 tons/hr, using baghouses CE-140-08-G and CE-

140-09-G as control, and exhausting to bin vents 140-08-G and 140-09-G, respectively.

(2) Two (2) bucket elevators at the Corn Dump Pit and Receiving System, identified as Bucket Elevators No. 2a and 2b, using baghouse CE140-05-G as control, exhausting to stack S140-05-G.

IV. Utility Area

The Utility area includes the following boiler used to supply steam for plant processes.

(**y**~~dd~~) Natural gas-fired Package Boiler #1 (Unit ID 89-03-U), installed in 2006, with a maximum heat input capacity of 247 million Btu/hr, and exhausting to stack S89-03-U. Under NSPS 40 CFR 60 Subpart Db, Package Boiler #1 is a steam-generating unit with a heat input capacity greater than 100 million Btu/hr. **Under NESHAP 40 CFR 63, Subpart DDDDD, this boiler is an existing affected unit.**

V. Refinery Area

~~(ee) Reserved~~

(~~ff~~ **z**) Corn Syrup Spray Dryer #4 (Unit ID 100-03-R), installed in April 1992. Corn syrup is fed to a dryer at a maximum throughput of 4.8 ton/hr. The solids are sent through cyclones to a packing area. Particulate emissions are controlled by a wet scrubber (CE100-03-R) that exhausts to stack S100-03-R.

....

VI. Starch Production Area

(~~rr~~ **ll**) Batch Scale Hopper #1 (Unit ID 34-01-S), installed in January 1991, with a maximum throughput of 24 ton/hr. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34-01-S) that exhausts to stack S34-01-S.

...

(~~uu~~ **oo**) Surge Hopper #1 (Unit ID 34-05-S), installed in January 1991, with a maximum throughput of 6 ton/hr. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34-05-S) that exhausts to stack S34-05-S.

~~(vv) Reserved~~

...

(~~ddd~~ **ww**) Starch Ring Dryer #3 (Unit ID 125-01-S), installed in May 1980. Cornstarch is fed to this 62 MMBtu/hr natural gas-fired ring dryer at a maximum throughput of 26.55 ton/hr. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by a wet scrubber (CE125-01-S) that exhausts to stack S125-01-S.

~~(eee) Reserved~~

(~~fff~~ **xx**) Special Starch Process with Starch Ring Dryer #4 (Unit ID 128-01-S), installed in December 1993. Cornstarch is fed to this 30 MMBtu/hr natural gas-fired dryer at a maximum throughput of 12.5 ton/hr. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by wet scrubber (CE128-01-S) that exhausts to stack S128-01-S.

...

(~~mmm~~ **eee**) Dextrin Blender (Unit ID 130-05-S), installed in October 1993, with a maximum throughput of 30 ton/hr. Cornstarch is blended and moved to the warehouse for packing. Particulate emissions are controlled by a bag filter dust collector (CE130-05-S) that exhausts to stack S130-05-S.

(~~nnn~~**fff**) One (1) propylene oxide tank, approved in 2015 for construction, identified as ~~(~~93-18-S~~)~~, with a maximum capacity of 28,000 gallons, equipped with a thermal oxidizer (CE93-41-S). This tank also provides propylene oxide to other starch processes.

(fff1) One (1) 28,000 gallon horizontal propylene oxide tank (Unit ID 93-18-S), installed in 1988, with 95% efficient vapor recovery (liquid nitrogen condenser). This tank also provides propylene oxide to other starch processes.

(~~ooo~~**ggg**) Bldg 128 Tank Farm, approved in 2015 for construction. Tanks include HCl, hydrogen peroxide, sodium hypochlorite and sodium Bisulfate storage tanks. The tanks vent to an acid fume scrubber.

(ggg1) Bldg 128 Tank Farm, installed in November 1999. Tanks include HCl, Acetic Anhydride, Sodium Bisulfate storage tanks, and the Acetic/Adipic mix tank.

...

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

This stationary source has 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 [326 IAC 6-1-2].~~

~~(b) Fuel oil-fired combustion sources with heat input equal to or less than 2 million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight [326 IAC 6-1-2].~~

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

(~~d~~**a**) Combustion source flame safety purging on startup.

...

(~~l~~**i**) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. ~~[326 IAC 6-1-2]~~

...

(~~v~~**s**) Paved and unpaved roads and parking lots with public access. ~~[326 IAC 6-4]~~

...

(~~aa~~**x**) On-site fire and emergency response training approved by the department.

~~(bb) Diesel emergency generators not exceeding 1600 horsepower.~~

~~(cc) Stationary fire pumps.~~

(~~dd~~**y**) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. ~~[326 IAC 6-1-2]~~

...

(~~ff~~**aa**) A laboratory as defined in 326 IAC 2-7-1(21)(D).

(bb) One (1) diesel-fired emergency generator, identified as 93-41-S, approved in 2016 for construction, with a rating of 496 HP, manufactured after 2009.

Under NSPS, Subpart IIII, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(cc) One (1) gasoline-fired emergency generator, identified as Generac Model GP5000 (manufactured in 2009, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.16 MMBtu/hr.

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(dd) One (1) gasoline-fired emergency generator, identified as Honda EU7000 (manufactured in 2014, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.1 MMBtu/hr.

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(ee) Six (6) kerosene-fired Dayton Torpedo heaters, approved in 2016 for construction, with a total combined heat input capacity of 1.05 MMBtu/hr.

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, T089-~~27009~~**36144**-00203, 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.11 Emergency Provisions [326 IAC 2-7-16]

....

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

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Northwest Regional Office phone: (219) **464-0233** ~~757-0265~~; fax: (219) ~~757-0267~~ **464-0553.**

...

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 T089-~~27009~~**36144**-00203 and issued pursuant to permitting programs approved into the state implementation plan have been either:

....

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

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(~~40~~**42**). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

...

(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)** ~~(b) or (c)~~. The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(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~~**37**)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

C.15 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5][326 IAC 2-7-6]

~~(a)~~**(I)** Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation, **not subject to CAM,** in this permit:

~~(1)~~**(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.

~~(2)~~**(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:

....

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

(1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)~~(a)(2)~~**(c)** of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document

the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

...

C.18 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2][326 IAC 2-3]~~[326 IAC 2-1.1-5]~~

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

~~(1)~~ **(AA)** All calibration and maintenance records.
~~(2)~~ **(BB)** All original strip chart recordings for continuous monitoring instrumentation.
~~(3)~~ **(CC)** Copies of all reports required by the Part 70 permit.
Records of required monitoring information include the following, where applicable:
~~(4)~~**(AA)** The date, place, as defined in this permit, and time of sampling or measurements.
~~(5)~~ **(BB)** The dates analyses were performed.
~~(6)~~ **(CC)** The company or entity that performed the analyses.
~~(7)~~ **(DD)** The analytical techniques or methods used.
~~(8)~~ **(EE)** The results of such analyses.
~~(9)~~ **(FF)** The operating conditions as existing at the time of sampling or measurement.

C.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2][326 IAC 2-3]~~[326 IAC 2-1.1-5]~~ [40 CFR 64][326 IAC 3-8]

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

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

...

(e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any “project” (as defined in 326 IAC 2-2-1 (oo) and/or 326 IAC 2-3-1 (jj)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to **IDEM, OAQ**:

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in

326 IAC 2-2-1 (ww) and/or 326 IAC 2-3-1 (pp), for that regulated NSR pollutant, and

...

SECTION D.0 ~~FACILITY~~ **EMISSIONS UNIT** OPERATION CONDITIONS - Sourcewide Limitations

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

D.0.3 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) ~~No later than 180 days after the issuance of permit number T089-27009-00203, in~~ **In** order to demonstrate compliance with Conditions D.0.1, D.3.6, D.5.3, and D.6.3, the Permittee shall perform VOC testing on the following units utilizing methods as approved by the Commissioner.

....

~~No later than 180 days after initial startup of new thermal oxidizer S128-14-S, in~~ **In** order to demonstrate compliance with Conditions D.0.1 and D.6.3, the Permittee shall perform VOC testing on thermal oxidizer S128-14-S utilizing methods as approved by the Commissioner.

These tests shall be repeated at least once every five (5) years from the date of ~~this~~ **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 testing required by this condition.

(b) ~~No later than180 days after the issuance of permit number T089-27009-00203, in~~ **In** order to demonstrate compliance with Condition D.0.1, the Permittee shall perform CO testing on the following units utilizing methods as approved by the Commissioner.

Emission Source Description	EU or Emission Point ID
Thermal Oxidizer	S128-14-S
Activated Carbon Regeneration Furnace #2	104-01-R

~~No later than 180 days after initial startup of new thermal oxidizer S128-14-S, in~~ **In** order to demonstrate compliance with Conditions D.0.1, the Permittee shall perform CO testing on thermal oxidizer S128-14-S utilizing methods as approved by the Commissioner.

These tests shall be repeated at least once every five (5) years from the date of ~~this~~ **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 testing required by this condition.

(c) ~~No later than 180 days after the issuance of permit number T089-27009-00203, in~~ **In** order to demonstrate compliance with Condition D.0.1, the Permittee shall perform SO_2 testing on the following units utilizing methods as approved by the Commissioner.

....

These tests shall be repeated at least once every five (5) years from the date of ~~this~~ **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 testing required by this condition.

D.0.5 Parametric Monitoring for Scrubbers

The Permittee shall monitor and record the recirculation water flow rate (if applicable) and pH of the scrubbing liquid for the wet gas scrubbers associated with units 89-01-G, 121-01-G, 124A-01-G, and 104-01-R at least once per day when the process is in operation. **The Permittee shall maintain the flow rate at or above the minimum in the table below. When for any one reading, the flow rate is below the above mentioned minimum, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A reading that is below the above mentioned minimum flow rate is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.** ~~When for any one reading, each parametric range or the minimum operating parameter for the scrubbers in below table is outside its normal range, 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.~~

Scrubber ID	Minimum Flow Rate of Scrubbing Liquor (gallons/minute)	pH of Scrubbing Liquor
CE89-01-G	400	7.0
CE121-01-G	N/A	5.5
CE124A-01-G	N/A	5.5
CE104-01-R	N/A	7.0

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

D.0.6 Record Keeping Requirements **[326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

(a) To document the compliance status with Condition~~s~~ D.0.4, the following record keeping shall be maintained onsite:

(1) Description of measuring device (digital data acquisition systems),

(2) Data from the device and any temporary data logged manually as back-up,

(3) Excursions,

(4) Corrective actions taken, and

(5) Calibration records.

(b) ~~In order t~~**T**o document the compliance status with condition D.0.5, the Permittee shall maintain the once per day records of the water recirculation flow rate and pH during normal operation. The Permittee shall include in its daily record when recirculation water flow and pH are not taken and the reason for the lack of recirculation water flow rate and pH (e.g. the process did not operate that day).

SECTION D.1 **EMISSIONS UNIT** ~~FACILITY~~ OPERATION CONDITIONS - Wastewater Treatment Process

Emissions Unit ~~Facility~~ Description ~~[326 IAC 2-7-5(15)]~~: Description: I. Wastewater Treatment Process

(a) One (1) anaerobic wastewater treatment process installed in July 1995. Biogas is generated in the wastewater treatment plant by anaerobic reaction. The biogas can be controlled by:

...

(2) One (1) Biogas Flare (Unit ID 800-~~05~~**04**-E), installed in July 1995. The biogas flare converts the hydrogen sulfide (H2S) in the biogas to sulfur dioxide (SO2). The biogas flare exhausts to stack ID S800-05-E.

...

D.1.1 H_2S PSD Minor Limit [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:

All biogas shall either be combusted for energy recovery in a plant process or combusted in the Biogas Flare (Unit ID 800-~~05~~**04**-E) such that H_2S emissions shall be limited to less than ten (10) tons per twelve (12) consecutive month period.

...

D.1.2 SO_2 PSD Minor Limit [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:

All biogas shall either be combusted for energy recovery in a plant process or combusted in the Biogas Flare (Unit ID 800-~~05~~**04**-E) such that SO_2 emissions shall be limited to less than forty (40) tons per twelve (12) consecutive month period.

...

D.1.3 Lake County Sulfur Dioxide Emission Limitations [326 IAC 7-4.1-5]

Pursuant to 326 IAC 7-4.1-5 (Lake County Sulfur Dioxide Emission Limitations), emissions of sulfur dioxide from the Biogas Flare (Unit ID 800-~~05~~**04**-E) shall not exceed 9.13 pounds per hour.

~~D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]~~

~~In order to demonstrate compliance with Conditions D.0.1, D.1.1, D.1.2, and D.1.3, the Permittee shall perform design and operation testing for the Biogas Flare (800-05-E), within one hundred eighty (180) days after issuance of permit number 089-27009-00203, utilizing methods as approved by the Commissioner. 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 testing required by this condition.~~

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

D.1.**5**~~6~~ Compliance Determination Requirements

In order to assure ~~To ensure~~ compliance with Condition D.1.1, the biogas stream from anaerobic reaction shall be diverted to an active plant process burner or to the biogas flare at all times that a biogas stream is being generated.

D.1.**6**~~7~~ Biogas Sampling

D.1.**7**~~8~~ Flame Presence [40 CFR 64]

D.1.**8**~~9~~ Record Keeping Requirements **[326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

(a) To document the compliance status with Condition ~~D.1.7~~ **D.1.6**, the Permittee shall maintain a record of the bimonthly samples of biogas and the calculated H2S and SO2 emissions based on those samples.

(b) To document the compliance status with Condition ~~D.1.8~~ **D.1.7***,* the Permittee shall maintain a daily record of the flame presence. The Permittee shall include in its daily record when a flame presence notation is not taken and the reason for the lack of a flame presence notation (e.g. the process did not operate that day).

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

D.1.**9**~~10~~ Reporting Requirements [326 IAC 7-4.1-5(b)]

(a) A quarterly report of all H2S and SO_2 emissions from unit 800-04-E 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(~~34~~**35**).

(b) A quarterly report of all SO_2 emissions from units' 121-01-G, 89-01-G, 124A-01-G, 104-01-R, and 800-04-E, to document the compliance status with 326 IAC 7-4.1-5(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(~~34~~**35**).

SECTION D.2 ~~FACILITY~~ **EMISSIONS UNIT** OPERATION CONDITIONS - Alternate Carbohydrate Area

~~Facility~~ **Emissions Unit** Description [326 IAC 2-7-5(14)]: II. Alternate Carbohydrate Area

...

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

~~D.2.1 PM/PM10/PM2.5 PSD and Nonattainment NSR Minor Limit [326 IAC 2-2] [326 IAC 2-1.1-5]~~

~~In order to make the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable, the PM, PM10 and PM2.5 emissions from the following operations shall not exceed the emissions limits listed in the table below:~~

~~Unit~~	~~Unit ID~~	~~PM/PM10/PM2.5 Emission Limit (lb/hr)~~
~~No. 1 Alternate Carbohydrate Storage Bin~~	~~127-28-B~~	~~0.18~~
~~No. 2 Alternate Carbohydrate Storage Bin~~	~~127-29-B~~	~~0.18~~
~~Alternate Carbohydrate Mill Feed Hopper~~	~~127-30-B~~	~~0.028~~

~~Compliance with these limits in conjunction with the PM, PM10 and PM2.5 limits in Condition D.3.1, will ensure that the PM emissions from Significant Source Modification No. 089-25241-00203 are less than 25 tons per twelve (12) consecutive month period, PM10 emissions from Significant Source Modification No. 089-25241-00203 are less than 15 tons per twelve (12) consecutive month period and PM2.5 emissions from Significant Source Modification No. 089-25241-00203 are less than 10 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-2 (PSD) are rendered not applicable.~~

D.2.~~2~~**1** Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6.8-2]

...

~~D.2.3 VOC Emissions [326 IAC 8-7] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]~~

~~Pursuant to 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties), the BCD Reaction and Separation (Unit ID 127-03-B) has been removed from the source. The shutdown of this unit shall be permanent.~~

D.2.~~4~~**2** Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

~~D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]~~

~~In order to demonstrate compliance with Conditions D.2.1 and D.2.2, the Permittee shall perform PM and PM10 testing for the No. 1 and No. 2 Alternate Carbohydrate Storage Bins (127-28-B & 127-29-B) and the Alternate Carbohydrate Mill Feed Hopper (127-30-B), within sixty (60) days after achieving the maximum capacity, but not later than one hundred eighty (180) days after initial startup, utilizing methods as approved by the Commissioner. 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 includes filterable and condensible PM-10.~~

D.2.~~6~~**3** Particulate Matter ~~[326 IAC 6.8-2] [326 IAC 2-7-6(6)][326 IAC 2-2][326 IAC 2-1.1-5]~~

(a) In order to **assure compliance** ~~comply~~ with Condition~~s~~ D.2.1 ~~and D.2.2~~, the bag filter dust collectors for ~~PM, and~~ PM10 control shall be in operation and control emissions from their associated facilities at all times that the facilities are in operation.

...

D.2.~~7~~**4** Parametric Monitoring (Dust Collectors)

...

D.2.**5**~~8~~ Broken or Failed Bag Detection

...

~~D.2.9 Visible Emissions Notations~~

~~(a) Visible emission notations of each Alternate Carbohydrate Area 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 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. Failure to take response steps shall be considered a deviation from this permit.~~

D.2.~~10~~**6** Record Keeping Requirements **[326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

(a) To document the compliance status with Condition ~~D.2.7~~ **D.2.4**, the Permittee shall maintain a daily record of the pressure drops across the baghouses controlling the processes. 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).

~~(b) To document the compliance status with Condition D.2.9, the Permittee shall maintain a daily record of visible emission notations of the Alternate Carbohydrate Area facility stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).~~

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

SECTION D.3 **EMISSIONS UNIT** ~~FACILITY~~ OPERATION CONDITIONS - Grind and Feedhouse Area

Emissions Unit ~~Facility~~ Description ~~[326 IAC 2-7-5(15)]~~: III. Grind and Feedhouse Area

(f) Gluten Dryer System **equipped with an integral cyclone** (Unit ID 121-01-G), installed in March 1995. Gluten meal is fed to a 12.5 MMBtu/hr natural and bio gas-fired ring dryer at a maximum throughput of 15,800 lb/hr. Particulate emissions are controlled by wet scrubber (CE121-01-G) that exhausts to stack S121-01-G.

~~(g) No. 2 Gluten Dryer (Unit ID 121A-01-G), approved for construction in 2008. Gluten meal is fed to a 17 MMBtu/hr natural and bio gas-fired ring dryer at a maximum throughput of 19,700 lb/hr. Particulate emissions are controlled by two (2) wet scrubbers operating in series, one venturi-type followed by one tray-type scrubber (collectively identified as Unit ID CE121A-01-G) that exhausts to stack S121A-01-G.~~

~~(h) One (1) Germ Dryer/Cooler (Unit ID 203-01-G), approved for construction in 2008. Corn germ is fed to a 30 MMBtu/hr natural and bio gas-fired germ dryer and cooler at a maximum throughput of 38,600 lb/hr. Particulate emissions are controlled by one (1) wet scrubber (Unit ID CE203-01-G) that exhausts to stack S203-01-G.~~

~~(i) No. 1 Bran Bunker (Unit ID 89-06-G), approved for construction in 2008, with a maximum throughput rate of 107,433 tons per year, using a bin vent filter (Unit ID CE089-06-G) with an outlet grain loading of 0.01 gr/dscf as control, and exhausting to stack S89-06-G.~~

~~(j) No. 2 Bran Bunker (Unit ID 89-07-G), approved for construction in 2008, with a maximum throughput rate of 107,433 tons per year, using a bin vent filter (Unit ID CE89-07-G) with an outlet grain loading of 0.01 gr/dscf as control, and exhausting to stack S89-07-G.~~

~~(k) One (1) Bran Conveyor System (Unit ID 89-08-G), approved for construction in 2008, with a maximum throughput rate of 107,433 tons per year, using existing scrubber CE89-01-G (constructed in 1995) as control, and exhausting to stack S89-01-G.~~

~~(l) One (1) Bran Preweigh Hopper (Unit ID 89-09-G), approved for construction in 2008, with a maximum throughput rate of 107,433 tons per year, using a bin vent filter (Unit ID CE89-09-G) with an outlet grain loading of 0.01 gr/dscf as control, and exhausting to stack S89-09-G.~~

....

(~~n~~**h**) Germ Dryer/Cooler **equipped with an integral cyclone** (Unit ID 124A-01-G), installed in November 1994. Corn germ is fed to this 12.9 MMBtu/hr natural and bio gas-fired germ dryer and cooler at a maximum throughput of 16,580 lb/hr. Particulate emissions are controlled by one (1) scrubber (CE124A-01-G) that exhausts to stack S124A-01-G.

...

(~~cc~~**w**) Twenty-four (24) steep tanks (Unit ID Steephouse - Grind 1), consisting of 21 steep tanks installed prior to 1973 and 3 steep tanks installed in December 1995. The steep tanks contain a mildly acidic solution to soften the corn prior to milling. Tanks are individually vented and have only working/breathing losses.

(x) The following units, approved in 2016 for construction:

(1) Two (2) corn storage silos at the Corn Dump Pit and Receiving system, identified as 140-08-G and 140-09-G, each with a maximum throughput of 420 tons/hr, using baghouses CE-140-08-G and CE-140-09-G as control, and exhausting to bin vents 140-08-G and 140-09-G, respectively.

(2) Two (2) bucket elevators at the Corn Dump Pit and Receiving System, identified as Bucket Elevators No. 2a and 2b, using baghouse CE140-05-G as control, exhausting to stack S140-05-G.

~~D.3.1 PM/PM10 and PM2.5 PSD and Nonattainment NSR Minor Limit [326 IAC 2-2 [326 IAC 2-1.1-5]~~

~~In order to make the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable:~~

~~(a) The PM, PM10 and PM2.5 emissions from the following operations shall not exceed the emissions limits listed in the tables below:~~

~~Unit~~	~~Unit ID~~	~~Control Device ID~~	~~PM/PM10 Emission Limit (lb/hr)~~	~~PM2.5 Emission Limit (lb/hr)~~
~~Storage Bin No. 5 (Grind 1)~~	~~33-01-G~~	~~CE33-01-G~~	~~0.171~~	~~0.029~~
~~Storage Bin No. 6 (Grind 2)~~	~~33-02-G~~	~~CE33-02-G~~	~~0.171~~	~~0.029~~
~~Corn Cleaner~~	~~33-03-G~~	~~CE33-03-G~~	~~0.21~~	~~0.036~~
~~Fiber Dryer & Bran Conveyor System~~	~~89-01-G / 89-08-G~~	~~CE-89-01-G~~	~~3.746~~	~~0.633~~
~~No. 1 Gluten Dryer~~	~~121-01-G~~	~~CE121-01-G~~	~~2.245~~	~~0.382~~
~~Storage Bin #3~~	~~140-03-G~~	~~CE140-03-G~~	~~0.343~~	~~0.058~~
~~Storage Bin #4~~	~~140-04-G~~	~~CE140-04-G~~	~~0.343~~	~~0.058~~
~~Storage Bin #1~~	~~140-01-G~~	~~CE140-01-G~~	~~0.343~~	~~0.058~~
~~Storage Bin #2~~	~~140-02-G~~	~~CE140-02-G~~	~~0.343~~	~~0.058~~
~~Corn Dump Pit~~	~~140-05-G~~	~~CE140-05-G~~	~~1.286~~	~~0.219~~
~~Gravity Take-Up Conveyor~~	~~140-06-G~~	~~CE140-06-G~~	~~0.154~~	~~0.026~~
~~Corn Elevator Conveying~~	~~140-07-G~~	~~CE140-07-G~~	~~0.086~~	~~0.015~~
~~Germ Tank 1310~~	~~200-01-G~~	~~CE200-01-G~~	~~0.05~~	~~0.009~~
~~Gluten Tank 1410~~	~~200-02-G~~	~~CE200-02-G~~	~~0.05~~	~~0.009~~
~~Germ Tank 1110~~	~~200-03-G~~	~~CE200-03-G~~	~~0.05~~	~~0.009~~
~~Gluten Tank 1010~~	~~200-04-G~~	~~CE200-04-G~~	~~0.05~~	~~0.009~~

~~Unit~~	~~Unit ID~~	~~Control Device ID~~	~~PM/PM10 Emission Limit (lb/hr)~~	~~PM2.5 Emission Limit (lb/hr)~~
~~Bulk Loadout~~	~~200-05-G~~	~~CE200-05-G~~	~~1.21~~	~~0.206~~
~~Corn Screening Silo~~	~~200-06-G~~	~~CE200-06-G~~	~~0.05~~	~~0.009~~
~~Central Vacuum Loadout~~	~~200-07-G~~	~~CE200-07-G~~	~~0.02~~	~~0.003~~
~~No. 1 Bran Bunker~~	~~89-06-G~~	~~CE89-06-G~~	~~0.006~~	~~0.001~~
~~No. 2 Bran Bunker~~	~~89-07-G~~	~~CE89-07-G~~	~~0.006~~	~~0.001~~
~~Bran Preweigh Hopper~~	~~89-09-G~~	~~CE89-09-G~~	~~0.006~~	~~0.001~~
~~No. 2 Gluten Dryer~~	~~121A-01-G~~	~~CE121A-01-G~~	~~2.4~~	~~0.349~~
~~Germ Dryer/Cooler~~	~~203-01-G~~	~~CE203-01-G~~	~~2.81~~	~~0.343~~

~~(b) The Germ Dryer/Cooler (203-01-G) hours of operation shall be limited to 8,500 hours per twelve (12) consecutive month period, with compliance at the end of each month.~~

~~(c) Pursuant to 326 IAC 2-2 (PSD), the following units shall be removed from operation once the modification permitted under SSM 089-25241-00203 has been constructed:~~

~~(1) Rotary Feed Dryer (89-03-G)~~
~~(2) Dry Feed Transfer (89-05-G)~~
~~(3) Germ Storage Silo (121-14-G)~~
~~(4) Waxy Feed Drum Dryer (124-01-G)~~
~~(5) Waxy Feed Mill Equipment (124-22-G)~~
~~(6) Wet Feed Transfer (124-23-G)~~
~~(7) Hammermill No. 1 (201-01-G)~~
~~(8) Hammermill No. 2 (201-02-G)~~
~~(9) Pellet Cooler No. 1 (201-03-G)~~
~~(10) Pellet Cooler No. 2 (201-04-G)~~
~~(11) Loose Feed Bin Vent (201-05-G)~~
~~(12) Central Vacuum Pelletizing (201-06-G)~~
~~(13) Receiver 1st Stage Germ Dryer (21A-01-G)~~
~~(14) 1st Stage Germ Dryer (21A-02-G)~~
~~(15) Receiver 2nd Stage Germ Dryer (51A-01-G)~~
~~(16) 2nd Stage Germ Dryer (51A-02-G)~~

~~The shutdown of these units shall be permanent.~~

~~(d) The existing Germ Dryer/Cooler (124A-01-G) shall be shutdown and removed from the source no later than 180 days after the startup of the new Germ Dryer/Cooler (Unit ID 203-01-G). The shutdown and removal of this unit shall be permanent.~~

~~Compliance with these limits in conjunction with the PM, PM10 and PM2.5 limits in Condition D.2.1, will ensure that the PM emissions from Significant Source Modification No. 089-25241-00203 are less than 25 tons per twelve (12) consecutive month period, PM10 emissions from Significant Source Modification No. 089-25241-00203 are less than 15 tons per twelve (12) consecutive month period and PM2.5 emissions from Significant Source Modification No. 089-25241-00203 are less than 10 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-2 (PSD) are rendered not applicable for PM/PM10 and PM2.5 for Significant Source Modification No. 089-25241-00203.~~

D.3.1 PM, PM10, and PM2.5 PSD Minor Limit [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the PM, PM10, and PM2.5 emissions from each of the corn silos 140-08-G and 140-09-G shall be limited as follows:

Unit	Unit ID	Control Device ID	PM Emission Limit (lb/hr)	PM10 Emission Limit (lb/hr)	PM2.5 Emission Limit (lb/hr)
Corn Silo	**140-08-G**	**CE140-08-G**	**2.74**	**1.60**	**1.10**
Corn Silo	**140-09-G**	**CE140-09-G**	**2.74**	**1.60**	**1.10**

Compliance with these emission limits, in combination with the potential to emit of PM, PM10 and PM2.5 of the emergency generator 93-41-S, will ensure that the potential to emit from this modification (SSM No. 089-36416-00203) is less than twenty-five (25) tons of PM per year, less than fifteen (15) tons of PM_{10} per year, and ten (10) tons of direct $PM_{2.5}$ per year, and therefore will render the requirements of 326 IAC 2-2 not applicable.

~~D.3.2 VOC Emission Offset [326 IAC 2-3]~~

~~(a) Pursuant to 326 IAC 2-3 (Emission Offset), the following units shall be removed from operation once the modification permitted under SSM 089-25241-00203 has been constructed:~~

~~(1) Rotary Feed Dryer (89-03-G)~~
~~(2) Waxy Feed Drum Dryer (124-01-G)~~
~~(3) 1st Stage Germ Dryer (21A-02-G)~~
~~(4) 2nd Stage Germ Dryer (51A-02-G)~~
~~(5) Hammermill No. 1 (201-01-G)~~
~~(6) Hammermill No. 2 (201-020-G)~~
~~(7) Pellet Cooler No. 1 (201-03-G)~~
~~(8) Pellet Cooler No. 2 (201-04-G)~~
~~(9) Loose Feed Bin Vent (201-05-G)~~
~~(10) Central Vacuum Pelletizing (201-06-G)~~

~~The shutdown of these units shall be permanent.~~

~~(b) The existing Germ Dryer/Cooler (124A-01-G) shall be shutdown and removed from the source no later than 180 days after the startup of the new Germ Dryer/Cooler (Unit ID 203-01-G). The shutdown and removal of this unit shall be permanent.~~

~~Compliance with these requirements will ensure that the VOC emissions from Significant Source Modification No. 089-25241-00203, are less than twenty-five (25) tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-3 (EO) are rendered not applicable for VOC for Significant Source Modification No. 089-25241-00203.~~

D.3.~~3~~**2** Particulate Matter less than 10 microns in diameter (PM10) [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2-**8** (Lake County: PM10 Emission Requirements), emissions of particulate matter less than ten microns in diameter (PM10) shall not exceed the following:

Unit ID	PM10 Limit (gr/dscf)	PM10 Limit (lbs/hr)
Gluten Dryer System (121-01-G)	0.03	3.0
Fiber Drying Equipment (89-01-G)	0.01	4.5
Germ Dryer/Cooler (124A-01-G)	0.02	1.852~~1.872~~
Corn Dump Pit (140-05-G)	0.01	1.286
Corn Elevator Conveying (140-07-G)	0.01	0.086
Corn Receiving and Storage Bins 1, 2, 3, & 4	0.02 each	0.343 each
Corn Receiving and Storage Day Tanks 5 & 6	0.02 each	0.171 each
Gravity Take-up Conveyor (140-06-G)	0.01	0.154

Corn Cleaner (33-03-G)	0.01	0.21

D.3.4**3** Particulate Matter Limitations for Lake County [326 IAC **6**~~6.8~~-1-2(h)]

Pursuant to 326 IAC **6**~~6.8~~-1-2(h) (Nonattainment Area Particulate Limitations), emissions of particulate matter from the following units shall not exceed the following limitations:

Unit ID	PM Limit (gr/dscf)	PM Limit (lbs/hr)
Central Vacuum Loadout (200-07-G)	0.005	0.02
Germ Tank 1310 (200-01-G)	0.005	0.05
Gluten Tank 1410 (200-02-G),	0.005	0.05
Corn Screenings Silo (200-06-G)	0.005	0.05
Gluten Tank 1010 (200-04-G)	0.005	0.05
Germ Tank 1110 (200-03-G)	0.005	0.05
Bulk Loadout (200-05-G)	0.005	1.21

D.3.~~5~~**4** Particulate Matter Limitations for Lake County [326 IAC 6.8-1-2]

~~Pursuant to 326 IAC 6.8-1-2 (Nonattainment Area Particulate Limitations), emissions of particulate matter from the following units shall not exceed the following limitations:~~

~~Unit ID~~	~~PM Limit (gr/dscf)~~	~~PM Limit (lbs/hr)~~
~~No. 2 Gluten Dryer (121A-01-G)~~	~~0.03~~	~~3.0~~
~~Germ Dryer/Cooler (203-01-G)~~	~~0.03~~	~~3.0~~
~~No. 1 Bran Bunker (89-06-G)~~	~~0.03~~	~~3.0~~
~~No. 2 Bran Bunker (89-07-G)~~	~~0.03~~	~~3.0~~
~~Bran Conveyor System (89-08-G)~~	~~0.03~~	~~3.0~~
~~Bran Preweigh Hopper (89-09-G)~~	~~0.03~~	~~3.0~~

Pursuant to 326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County), emissions of particulate matter from the corn silos 140-08-G and 140-09-G shall not exceed 0.03 grains per dry standard cubic feet.

D.3.~~6~~**5** VOC Emissions [326 IAC 8-7] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

Pursuant to 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties):

~~(a)~~ Emissions of VOC from the following units shall not exceed the following limitations:

Unit Name	Unit ID	VOC Limit (lbs/hr)
Gluten Dryer System	121-01-G	3.72
Germ Dryer/Cooler	124A-01-G	3.97
Steephouse – Grind 1	Bldg 23	0.0039 [1]

1 – Units are lbs per bushel

~~(b) The following units have been removed from the source:~~

~~Unit Name~~	~~Unit ID~~
~~Gluten Ring Dryer #1~~	~~19-03-G~~
~~Waxy Feed Drum Dryer~~	~~124-01-G~~
~~1st Stage Germ Dryer – Grind 1~~	~~21A-02-G~~
~~1st Stage Germ Dryer – Grind 2~~	~~Bldg 123~~
~~2nd Stage Germ Dryer~~	~~51A-02-G~~

~~Unit Name~~	~~Unit ID~~
~~Feed Flash Dryer #1~~	~~Bldg 21~~
~~Feed Flash Dryer #2~~	~~Bldg 21A~~
~~Rotary Feed Dryer #1~~	~~Bldg 20A~~
~~Rotary Feed Dryer #2~~	~~Bldg 20A~~
~~Rotary Feed Dryer #3~~	~~Bldg 20A~~
~~Rotary Feed Dryer #4~~	~~Bldg 20A~~
~~Rotary Feed Dryer #5~~	~~Bldg 20A~~
~~Rotary Feed Dryer – Grind 2~~	~~Bldg 124~~
~~Millhouse Aspiration System – Grind 1~~	~~Bldg 15~~
~~Millhouse Aspiration System – Grind 2~~	~~Bldg 123~~
~~Steephouse – Grind 2~~	~~Bldg 53~~
~~Feed Pelletizing System – Point A~~	~~91-13-G~~
~~Feed Pelletizing System – Point B~~	~~91-14-G~~
~~Feed Pelletizing System – Point C~~	~~91-15-G~~
~~Feed Pelletizing System – Point D~~	~~91-16-G~~

~~The shutdown of these units shall be permanent.~~

D.3.~~7~~**6** Sulfur Dioxide Limitations for Lake County [326 IAC 7-4.1-5]

Pursuant to 326 IAC 7-4.1-5 (Sulfur Dioxide Limitations), emissions of sulfur dioxide from the following units shall not exceed the following limitations:

Unit Name	Unit ID	~~PM~~ SO2 Limit (lbs/hr)
Gluten Dryer System	121-01-G	0.68
Fiber Drying Equipment	89-01-G	3.95
Germ Dryer/Cooler	124A-01-G	0.77

~~D.3.8 SO2 Emissions [326 IAC 7-4.1]~~

~~Pursuant to 326 IAC 7-4.1 (Lake County Sulfur Dioxide Emission Limitations), the sulfur dioxide emission rate from these units shall not exceed the following:~~

~~(a) SO2 emissions from the stack serving the No. 2 Gluten Dryer (121A-01-G) shall not exceed 0.3 lb/MMBtu.~~

~~(b) SO2 emissions from the stack serving the Germ Dryer/ Cooler (203-01-G) shall not exceed 0.3 lb/MMBtu.~~

D.3.~~9~~**7** Preventive Maintenance Plan [326 IAC 2-7-5(12)]

...

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

D.3.~~10~~**8** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition~~s D.3.1 and D.3.3~~ **D.3.2**, the Permittee shall perform ~~PM and~~ PM-10 testing on the Gluten Ring Dryer (121-01-G), 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 includes filterable and condensible PM.

~~(b) In order to demonstrate compliance with Conditions D.3.1 and D.3.5, the Permittee shall perform PM and PM10 testing for the No. 2 Gluten Dryer (121A-01-G) and the Germ Dryer/Cooler (203-01-G), within sixty (60) days after achieving the maximum capacity, but not later than one hundred eighty (180) days after initial startup, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this 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 includes filterable and condensible PM.~~

(~~c~~**b**) In order to demonstrate compliance with Condition ~~D.3.1~~ **D.3.2**, the Permittee shall perform ~~PM and~~ PM10 testing for the Scrubber (CE89-01-G) controlling the Fiber Dryer (89-01-G) ~~and the Bran Conveying System (89-08-G), within sixty (60) days after achieving the maximum capacity, but not later than one hundred eighty (180) days after initial startup,~~ utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of ~~this~~ **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 includes filterable and condensible PM.

~~(d) In order to demonstrate compliance with Condition D.3.8, the Permittee shall perform SO2 testing for the No. 2 Gluten Dryer (121A-01-G) and the Germ Dryer/Cooler (203-01-G), within sixty (60) days after achieving the maximum capacity, but not later than one hundred eighty (180) days after initial startup, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this 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.~~

~~(e) In order to demonstrate compliance with Conditions D.3.1 and D.3.5, the Permittee shall perform PM and PM10 testing for the No. 1 and No. 2 Bran Bunker (89-06-G and 89-07-G) and the Bran Preweigh Hopper (89-09-G), within sixty (60) days after achieving the maximum capacity, but not later than one hundred eighty (180) days after initial startup, utilizing methods as approved by the Commissioner. 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 includes filterable and condensible PM.~~

D.3.~~11~~**9** Particulate Matter ~~[326 IAC 6.8-2] [326 IAC 2-7-6(6)] [326 IAC 2-2] [326 IAC 2-1.1-5]~~

(a) In order to ~~comply~~ **assure compliance** with D.3.1, **D.3.2,** D.3.3, **and** D.3.4~~, and D.3.5~~, the control devices for PM, PM10, and PM2.5 control shall be in operation and control emissions from their associated facilities at all times that the facilities are in operation.

~~D.3.12 Visible Emissions Notations~~

~~(a) Visible emission notations of each Grind and Feedhouse facility 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 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. Failure to take response steps shall be considered a deviation from this permit.~~

~~D.3.13 Visible Emissions Notations [40 CFR 64]~~

~~(a) Visible emission notations of units' 121-01-G, 121A-01-G, 203-01-G, 89-08-G, 124A-01-G, 200-05-G, 140-05-G, 140-01-G, 140-02-G, 140-03-G, and 140-04-G 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 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. Failure to take response steps shall be considered a deviation from this permit.~~

D.3.**10**~~14~~ Parametric Monitoring (Dust Collectors **and Baghouses**)

...

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
...	...	...
Corn Silo (140-08-G)	Baghouse	0.1-6
Corn Silo (140-09-G)	Baghouse	0.1-6
Corn Cleaner (33-03-G)	Dust Collector	0.1 - 6
~~No. 1 and No. 2 Bran Bunkers (89-06-G)~~	~~Bin Vent~~	~~0.1-6~~
~~No. 2 Bran Bunker (89-07-G)~~	~~Bin Vent~~	~~0.1-6~~
~~Bran Preweigh Hopper (89-09-G)~~	~~Bin Vent~~	~~0.1-6~~

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.3.**11**~~15~~ Parametric Monitoring (Dust Collectors) [40 CFR 64]

D.3.**12**~~16~~ Parametric Monitoring (Scrubbers)

The Permittee shall record the pressure drop across ~~each~~ **the** scrubber used in the Grind and Feedhouse Area below, at least once per day when the associated system is in operation. **When for any one reading, the pressure drop across a scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is as listed in table below unless a different upper-bound or lower-bound value for this range is determined during the latest stack test.** ~~When for any one reading, the pressure drop across a scrubber is outside the following range 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 following range or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

...

D.3.**13**~~17~~ Parametric Monitoring (Scrubbers) [40 CFR 64]

The Permittee shall record the pressure drop across each scrubber **below** used in the Grind and Feedhouse Area, at least once per day when the associated system is in operation. **When for any one reading, the pressure drop across a scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is as listed in table below unless a different upper-bound or lower-bound value for this range is determined during the latest stack test.** ~~When for any one reading, the pressure drop across a scrubber is outside the following ranges 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 following ranges or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Unit ID	Control Equipment	Pressure Drop Range (inches of water)
Gluten Ring Dryer System (121-01-G)	Wet Scrubber	12 -19
~~No. 2 Gluten Dryer (121A-01-G)~~	~~Wet Scrubber~~	~~12-19~~
~~Germ Dryer/Cooler (203-01-G)~~	~~Wet Scrubber~~	~~6-12~~
~~Bran conveyor System (89-08-G)~~	~~Scrubber~~	~~0.1-6~~
Germ Dryer/Cooler (124A-01-G)	Scrubber	10-19

D.3.**14**~~18~~ Broken or Failed Bag Detection

D.3.**15**~~19~~ Scrubber Failure Detection

D.3.~~20~~**16** Record Keeping Requirements **[326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

~~(a) To document the compliance status with Conditions D.3.12 and D.3.13, the Permittee shall maintain a daily record of visible emission notations of the Grind and Feedhouse Area Facility 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~~**a**) To document the compliance status with Condition**s D.10, D.3.11, D.3.12, and D.3.13** ~~D.3.14, D.3.15, D.3.16, and D.3.17~~, the Permittee shall maintain a daily record of the pressure drop readings. 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) To document the compliance status with Condition D.3.1(b), the Permittee shall maintain records of the actual monthly hours that the Germ Dryer/Cooler (203-01-G) operated.~~

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

D.3.~~21~~**17** Reporting Requirements [326 IAC 7-4.1-5(b)]

~~(a)~~ A quarterly report of all SO_2 emissions from units 121-01-G, 89-01-G, 124A-01-G, 104-01-R, and 800-04-E, to document the compliance status with 326 IAC 7-4.1-5(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(~~34~~**35**).

~~(b) A quarterly report of the actual hours that the Germ Dryer/Cooler (203-01-G) operated to document the compliance status with Condition D.3.1(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(34).~~

SECTION D.4 ~~FACILITY~~ **EMISSIONS UNIT** OPERATION CONDITIONS - Utility Area

~~Facility~~ **Emissions Unit** Description ~~[326 IAC 2-7-5(14)]:~~ IV. Utility Area

The Utility area includes the following boiler used to supply steam for plant processes.

(~~ee~~**y**) Natural gas-fired Package Boiler #1 (Unit ID 89-03-U), installed in 2006, with a maximum heat input capacity of 247 million Btu/hr, and exhausting to stack S89-03-U. Under NSPS 40 CFR 60 Subpart Db, Package Boiler #1 is a steam-generating unit with a heat input capacity greater than 100 million Btu/hr. **Under NESHAP 40 CFR 63, Subpart DDDDD, this boiler is an existing affected unit.**

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

~~D.4.2 VOC Emissions [326 IAC 8-7] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]~~

~~Pursuant to 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties), the following units have been removed from the source:~~

~~Unit Name~~	~~Unit ID~~
~~Boiler #1~~	~~10-01-U~~
~~Boiler #2~~	~~10-02-U~~
~~Boiler #6~~	~~10-03-U~~
~~Boiler #7~~	~~10-04-U~~
~~Boiler #8~~	~~10-05-U~~
~~Boiler #10~~	~~10-06-U~~

~~The shutdown of these units shall be permanent.~~

D.4.**2**~~3~~ Preventive Maintenance Plan [326 IAC 2-7-5(12)]

...

SECTION D.5 ~~FACILITY~~ **EMISSIONS UNIT** OPERATION CONDITIONS - Refinery Area

~~Facility~~ **Emissions Unit** Description ~~[326 IAC 2-7-5(14)]~~: V. Refinery Area

~~(ee) Reserved~~

(~~ff~~ **z**) Corn Syrup Spray Dryer #4 (Unit ID 100-03-R), installed in April 1992. Corn syrup is fed to a dryer at a maximum throughput of 4.8 ton/hr. The solids are sent through cyclones to a packing area. Particulate emissions are controlled by a wet scrubber (CE100-03-R) that exhausts to stack S100-03-R.

(~~gg~~**aa**) Corn Syrup Spray Dryer/Cooler System #3 (Unit ID 100-01-R), installed in July 1987. Corn syrup is fed to a dryer at a maximum rate of 4.8 ton/hr. The solids are sent through cyclones to a packing area. Particulate emissions are controlled by a wet venturi scrubber (CE100-01-R) that exhausts through stack S100-01-R.

(~~hh~~**bb**)Activated Carbon Regeneration Furnace #2 (Unit ID 104-01-R), installed in July 1995. Spent carbon is regenerated in this 13.2 MMBtu/hr natural gas-fired furnace at a maximum throughput of 1.146 ton/hr. Emissions are controlled by a venturi scrubber and an impingement furnace scrubber (CE104-01-R) that exhaust through stack S104-01-R.

(~~ii~~ **cc**) Liquid Soda Ash Tank (Unit ID 104-02-R), installed in July 1995, with a maximum throughput of 15 ton/hr. Particulate emissions from loading this tank are controlled by a venturi scrubber (CE104-02-R) that exhausts to stack S104-02-R.

(~~jj~~ **dd**) Filter Aid Hopper (Unit ID 104-03-R), installed in July 1995, with a maximum throughput of 0.75 ton/hr. This hopper is equipped with a jet pulse baghouse (CE104-03-R) that exhausts to stack S104-03-R.

(~~kk~~**ee**)Sodium Bisulfite Bag Dump (Unit ID 104-05-R), installed in July 1995, with a maximum throughput of 0.7 ton/hr. This unit is controlled by a jet pulse baghouse (CE104-05-R) that exhausts to stack S104-05-R.

(~~ll~~ **ff**) Diatomaceous Earth Unloading (Unit ID 104-08-R), installed in November 1998**,** with a maximum throughput of 1.75 ton/hr. Diatomaceous earth (filter aid) is unloaded from railcar to silo. Particulate emissions are controlled by a Bin Vent Filter (DC2312) that exhausts to stack S104-08-R.

(~~mm~~ **gg**)Citric Acid Dump Station (Unit ID 104-09-R), installed in November 1998, with a maximum throughput of 30 lb/hr. Citric Acid is added during the production of corn syrup. Particulate emissions are controlled by a built-in dust collector (CE104-09-R) that exhausts to stack S104-09-R.

(~~nn~~ **hh**)Refinery Vacuum Pumps (1-3) (Unit IDs RVF 1-1, RVF 1-2, and RVF 1-3 Precoating Vacuum Pump), installed in July 1995. The pumps create the vacuum used to pull liquid corn syrup through a filtering media. Exhaust from the pumps is vented from the building.

(~~oo~~**ii**) Refinery Vacuum Pumps (4-6) (Unit IDs RVF 3-1, RVF 3-2, and RVF 3-3 Precoating Vacuum Pump), installed in November 1999. The pumps create the vacuum used to pull liquid corn syrup through a filtering media. Exhaust from the pumps is vented from the building.

(~~pp~~**jj**) Refinery Vacuum Pumps (7-8) (Unit IDs RVF 2-1 and RVF 2-2), installed in July 1995. The pumps create the vacuum used to pull liquid corn syrup through a filtering media. Exhaust from the pumps is vented from the building.

SECTION D.5 ~~FACILITY~~ **EMISSIONS UNIT** OPERATION CONDITIONS - Refinery Area

(~~qq~~**kk**) Two (2) HCL tanks (Unit ID HCL Tank – Refinery), installed in July 1995 and December 2002. Tanks store HCl used in the corn syrup manufacturing process. The tanks vent to an acid fume scrubber.

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

D.5.2 Particulate Matter Limitations for Lake County [326 IAC **6**~~6.8~~-1-2(h)]

Pursuant to CP 089-1230-00203, issued November 1998, and 326 IAC **6**~~6.8~~-1-2(h) (Nonattainment Area Particulate Limitations), emissions of particulate matter shall be limited to the following:

Unit ID	PM Limit (gr/dscf)	PM Limit (lbs/hr)
Diatomaceous Earth Unloading Silo (104-08-R)	0.01	0.064
Citric Acid Dump Station (104-09-R)	0.01	0.026

D.5.3 VOC Emissions [326 IAC 8-7] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

Pursuant to 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties):

~~(a)~~ Emissions of VOC from the following units shall not exceed the following limitations:

...

~~(b) The following units have been removed from the source:~~

~~Unit Name~~	~~Unit ID~~
~~Carbon Furnace – Old Refinery~~	~~Bldg 15~~
~~HCL Tanks – Old Refinery~~	~~17-04-R & 17-05-R~~

~~The shutdown of these units shall be permanent.~~

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

...

~~D.5.8 Visible Emissions Notations~~

~~(a) Visible emission notations of units' 104-02-R, 104-03-R, 104-05-R, 104-08-R, and 104-09-R 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 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. Failure to take response steps shall be considered a deviation from this permit.~~

~~D.5.9 Visible Emissions Notations [40 CFR 64]~~

~~(a) Visible emission notations of units' 100-03-R, 100-01-R, and 104-01-R 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 reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response required by this condition. Failure to take a reasonable response shall be considered a deviation from this permit.~~

D.5.~~10~~**8** Parametric Monitoring (Dust Collectors)

...

~~D.5.11 Reserved~~

...

D.5.~~12~~**9** Parametric Monitoring (Scrubbers)

...

D.5.**10**~~13~~ Parametric Monitoring (Scrubbers) [40 CFR 64]

The Permittee shall record the pressure drop across each scrubber used in the Refinery Area, at least once per day when the associated system is in operation. **When for any one reading, the pressure drop across a scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is as listed in table below unless a different upper-bound or lower-bound value for this range is determined during the latest stack test.** ~~When for any one reading, the pressure drop across a scrubber is outside the following range 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 following range or a range established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

...

D.5.~~14~~**11** Broken or Failed Bag Detection

....

D.5.~~15~~**12** Scrubber Failure Detection

...

D.5.~~16~~**13** Record Keeping Requirements **[326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

~~(a) To document the compliance status with Conditions D.5.8 and D.5.9, the Permittee shall maintain a daily record of the visible emission notations of the Refinery Area Facility 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~~ **a**) To document the compliance status with Conditions **D.5.8, D.5.9, and D.5.10** ~~D.5.10, D.5.12, and D.5.13~~, the Permittee shall maintain a daily record of the pressure drop readings. 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.5.~~17~~**14** Reporting Requirements [326 IAC 7-4.1-5(b)]

A quarterly report of all SO_2 emissions from units' 121-01-G, 89-01-G, 124A-01-G, 104-01-R, and 800-04-E, to document the compliance status with 326 IAC 7-4.1-5(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(~~34~~**35**).

SECTION D.6 ~~FACILITY~~ **EMISSIONS UNIT** OPERATION CONDITIONS - Starch Production Area

~~Facility~~ **Emissions Unit** Description ~~[326 IAC 2-7-5(14)]~~: VI. Starch Production Area

(~~rr~~**ll**) Batch Scale Hopper #1 (Unit ID 34-01-S), installed in January 1991, with a maximum throughput of 24 ton/hr. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34-01-S) that exhausts to stack S34-01-S.

....

~~(vv) Reserved~~

(~~ww~~**pp**) Batch Scale Hopper #2 (Unit ID 34B-13-S), installed in October 1993, with a maximum throughput of 24 ton/hr. Starch is pneumatically conveyed to a hopper. Particulate emissions are controlled by a bag filter dust collector (CE34B-13-S) that exhausts to stack S34B-13-S.

(~~xx~~**qq**) Dextrin Starch Reactor #2 (Unit ID 34B-04-S), installed in October 1993, with a maximum throughput of 6 ton/hr. Dried cornstarch is fed to a reactor heated by steam from the plant boiler. Particulate emissions are controlled by a bag filter dust collector (CE34B-04-S) that exhausts to stack S34B-04-S.

...

(~~ddd~~**vv**) Starch Ring Dryer #3 (Unit ID 125-01-S), installed in May 1980. Cornstarch is fed to this 62 MMBtu/hr natural gas-fired ring dryer at a maximum throughput of 26.55 ton/hr. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by a wet scrubber (CE125-01-S) that exhausts to stack S125-01-S.

~~(eee) Reserved~~

(~~fff~~**xx**) Special Starch Process with Starch Ring Dryer #4 (Unit ID 128-01-S), installed in December 1993. Corn starch is fed to this 30 MMBtu/hr natural gas-fired dryer at a maximum throughput of 12.5 ton/hr. Dried starch is collected with six cyclones in series. Particulate emissions are controlled by wet scrubber (CE128-01-S) that exhausts to stack S128-01-S.

...

(~~nnn~~**fff**) One (1) propylene oxide tank, approved in 2015 for construction, identified as ~~(~~93-18-S~~)~~, with a maximum capacity of 28,000 gallons, equipped with a thermal oxidizer (CE93-41-S). This tank also provides propylene oxide to other starch processes.

(fff1) One (1) 28,000 gallon horizontal propylene oxide tank (Unit ID 93-18-S), installed in 1988, with 95% efficient vapor recovery (liquid nitrogen condenser). This tank also provides propylene oxide to other starch processes.

(~~ooo~~**ggg**) Bldg 128 Tank Farm, approved in 2015 for construction. Tanks include HCl, hydrogen peroxide, sodium hypochlorite and sodium Bisulfate storage tanks. The tanks vent to an acid fume scrubber.

(ggg1) Bldg 128 Tank Farm, installed in November 1999. Tanks include HCl, Acetic Anhydride, Sodium Bisulfate storage tanks, and the Acetic/Adipic mix tank.

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

D.6.3 VOC Emissions [326 IAC 8-7] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

Pursuant to 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties):

~~(a)~~ Emissions of VOC from the following units shall not exceed the following limitations:

...

~~(b) The following units have been removed from the source:~~

~~Unit Name~~	~~Unit ID~~
~~Starch Reactors (9)~~	~~Bldg 54~~
~~South Dextrin Furnace #1~~	~~Bldg 47~~
~~North Dextrin Furnace #2~~	~~Bldg 47~~

~~The shutdown of these units shall be permanent.~~

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

D.6.5 Testing Requirements (PM10) [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

....

(b) ~~Within two hundred seventy (270) days after the issuance of this SPM 089-30779-00203, in~~ **In** order to demonstrate compliance with Condition D.6.1 and Condition 6.3, the Permittee shall perform PM10 and VOC testing for the Corn starch Storage Bin 23 dust collector (120-04-S), 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 includes filterable and condensible PM.

D.6.6 Volatile Organic Compounds (VOC) [326 IAC 2-**3**~~1.1-5~~] [326 IAC 8-7-9] [326 IAC 8-7-10]

...

(b) In order to **assure compliance** ~~comply~~ with Condition D.6.3(a), the thermal oxidizer (S128-14-S) shall be in operation and control emissions from Reactors 2, 3, 4, and/or 7 (128-07-S through 128-09-S and 128-12-S) at all times propylene oxide is being added to special starch Reactors 2, 3, 4, and/or 7 (128-07-S through 128-09-S and 128-12-S).

D.6.7 Particulate Matter

(a) In order to ~~comply~~ **assure compliance** with **Conditions** D.6.1 and D.6.2, the control devices for PM and PM10 control shall be in operation and control emissions from each facility at all times that the facility is in operation.

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

~~D.6.8 Visible Emissions Notations~~

~~(a) Visible emission notations of units' 34-01-S, 34-02-S, 34-03-S, 34-05-S, 34B-13-S, 34B-04-S, 34B-01-S, 34B-03-S, 34B-05-S, 34B-06-S, 128-25-S, and 128-26-S 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 required by this condition. Failure to take a reasonable response shall be considered a deviation from this permit.~~

~~D.6.9 Visible Emissions Notations [40 CFR 64]~~

~~(a) Visible emission notations of units' 48-09-S, 59-03-S, 125-01-S, 128-01-S, 120-01-S through 120-17-S, and 130-01-S through 130-05-S 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 required by this condition. Failure to take a reasonable response shall be considered a deviation from this permit.~~

D.6.**8**~~10~~ Parametric Monitoring (Dust Collectors)

D.6.**9**~~11~~ Parametric Monitoring (Dust Collectors) [40 CFR 64]

D.6.**10**~~12~~ Parametric Monitoring (Scrubbers) [40 CFR 64]

D.6.**11**~~13~~ Parametric Monitoring (Thermal Oxidizer) [326 IAC 2-**3**~~1.1-5~~] [326 IAC 8-7-9] [326 IAC 8-7-10] [40 CFR 64]

...

(b) The flow of propylene oxide shall be automatically interrupted when that temperature falls below ~~1300 °F or~~ the temperature established during the most recent compliant stack test.

(e) 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, **until more recent compliant stack test results are available**, when using propylene oxide in starch reactors 2, 3, 4 and/or 7.

....

D.6.**12**~~14~~ Broken or Failed Bag Detection

D.6.**13**~~15~~ Scrubber Failure Detection

D.6.**14**~~16~~ Parametric Monitoring

(a) The Permittee shall determine the appropriate duct pressure from the most recent valid stack test that demonstrates compliance with limits in **C**~~c~~ondition D.6.3(a).

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

D.6. **15**~~17~~ Record Keeping Requirements **[326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

~~(a) To document the compliance status with Conditions D.6.8 and D.6.9, the Permittee shall maintain a daily record of visible emission notations of the Starch Production Area 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~~ **a**) To document the compliance status with Conditions **D.6.8, D.6.9, and D.6.10** ~~D.6.10, D.6.11, and D.6.12~~, the Permittee shall maintain a daily record of the pressure drop readings. 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~~ **b**) To document the compliance status with Condition **D.6.11** ~~D.6.13~~, the Permittee shall maintain a daily record of the thermal oxidizer temperature. The Permittee shall include in its daily record when a thermal oxidizer temperature reading is not taken and the reason for the lack of thermal oxidizer temperature reading (e.g. the process did not operate that day).

(~~d~~ **c**) To document the compliance status with Condition ~~D.6.16~~ **D.6.14**, the Permittee shall maintain daily records of the duct pressure ~~and the duct pressure~~ used to demonstrate

compliance during the most recent compliant stack test. The Permittee shall include in its daily record when a duct pressure record is not taken and the reason for the lack of duct pressure record (e.g., the process did not operate that day).

....

SECTION D.7 ~~FACILITY~~ **EMISSIONS UNIT** OPERATION CONDITIONS - Starch Warehouse Area

~~Facility~~ **Emissions Unit** Description ~~[326 IAC 2-7-5(14)]~~: VII. Starch Warehouse Area

(~~nnn~~**hhh**) Channel 2 Receiver (Unit ID 93-32-W), installed in September 2000, with a maximum throughput of 15 ton/hr. Particulate emissions are controlled by a filter dust collector that exhausts to stack S93-32-W.

...

D.7.1 PSD and ~~Nonattainment NSR~~ **Emission Offset** Minor Limits [326 IAC 2-2][326 IAC 2-**3**~~1.1-5~~]

In order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-**3**~~1.1-5~~ (**Emission Offset** ~~Nonattainment NSR~~) not applicable, the PM10 and PM2.5 emissions from stack S93-40-W shall be less than the emission limits listed in the table below:

Equipment Description	Stack ID	PM10 Emission Limit (lb/hr)	PM2.5 Emission Limit (lb/hr)
Corn Syrup Solids Manufacturing System #5	stack S93-40-W	3.31	2.17

Compliance with the above limits, shall limit the PM emissions from stack S93-40-W to less than twenty-five (25) tons per twelve (12) consecutive month period and the PM_{10} emissions from stack S93-40-W to less than fifteen (15) tons per twelve (12) consecutive month period and the PM2.5 emissions from stack S93-40-W to less than ten (10) tons per twelve (12) consecutive month period. Compliance with the above limits renders the requirements of 326 IAC 2-2 (PSD) **and 326 IAC 2-3 (Emission Offset)** not applicable. ~~Compliance with the PM10 and PM2.5 limits also satisfies the PM2.5 requirements of 326 IAC 2-1.1-5 (Non-Attainment NSR).~~

D.7.3 Particulate Matter Limitations for Lake County [326 IAC 6~~.8~~-1-2(h)]

Pursuant to 326 IAC 6~~.8~~-1-2(h) (Non-attainment Area Particulate Limitations), emissions of particulate matter from the following units shall be limited to the following:

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

D.7.7 Particulate Matter ~~and Particulate Matter less than 10 microns in diameter (PM10) Control~~

(a) In order to ~~comply~~ **assure compliance** with D.7.1, D.7.2, D.7.3, and D.7.4, the control devices for PM, ~~and~~ PM10, **and PM2.5** control shall be in operation and control emissions from each facility at all times that the facility is in operation.

~~D.7.8 Visible Emissions Notations~~

~~(a) Visible emission notations of 93-32-W, 93-33-W, 93-34-W, 93-35-W, 93-37-W, 93-36-W, 93-38-W, 93-04-W, 93-05-W, 93-08-W, 93-09-W, 93-10-W, 93-15-W, 93-18-W, 93-39-W, and 93-40-W 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 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. Failure to take response steps shall be considered a deviation from this permit.~~

~~D.7.9 Visible Emissions Notations [40 CFR 64]~~

~~(a) Visible emission notations of units' 93-14-W, 93-16-W, and 93-17-W 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 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. Failure to take response steps shall be considered a deviation from this permit.~~

D.7.~~13~~**11** Record Keeping Requirements **[326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

~~(a) To document the compliance status with Conditions D.7.8 and D.7.9, the Permittee shall maintain a daily record of the visible emission notations of the Starch Warehouse Area 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~~ **a**) To document the compliance status with Conditions ~~D.7.10~~ **D.7.8** and ~~D.7.11~~ **D.7.9**, the Permittee shall maintain a daily record of the pressure drop readings. 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~~ **b**) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.8 EMISSIONS UNIT OPERATION CONDITIONS - Emergency Generator

Emissions Unit Description:

Insignificant Activity:

(bb) One (1) diesel-fired emergency generator (compression ignition), identified as 93-41-S, approved in 2016 for construction, with a rating of 496 HP, manufactured after 2009.

Under NSPS, Subpart IIII, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(cc) One (1) gasoline-fired emergency generator, identified as Generac Model GP5000 (manufactured in 2009, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.16 MMBtu/hr.

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(dd) One (1) gasoline-fired emergency generator, identified as Honda EU7000 (manufactured in 2014, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.1 MMBtu/hr.

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(ee) Six (6) kerosene-fired Dayton Torpedo heaters, approved in 2016 for construction, with a total combined heat input capacity of 1.05 MMBtu/hr.

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

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

D.8.1 Particulate Matter Limitations for Lake County [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2(a), the particulate matter emissions from the emergency generators and heaters listed above, shall not exceed 0.03 grain per dry standard cubic foot.

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

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

SECTION E.1 ~~NEW SOURCE PERFORMANCE STANDARDS FOR INDUSTRIAL-COMMERCIAL-INSTITUTIONAL STEAM GENERATING UNITS (40 CFR 60, Subpart Db)~~ **NSPS & NESHAP**

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

(~~dd~~**y**) Natural gas-fired Package Boiler #1 (Unit ID 89-03-U), installed in 2006, with a maximum heat input capacity of 247 million Btu/hr, and exhausting to stack S89-03-U. Under NSPS 40 CFR 60, Subpart Db, Package Boiler #1 is a steam-generating unit with a heat input capacity greater than 100 million Btu/hr. **Under NESHAP 40 CFR 63, Subpart DDDDD, this boiler is an existing affected unit.**

...

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.1.1 General Provisions Relating to ~~the NSPS for Industrial-Commercial-Institutional Steam Generating Units~~ **New Source Performance Standards** [326 IAC 12-1] [40 CFR 60, Subpart A]

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

E.1.2 NSPS for Industrial-Commercial-Institutional Steam Generating Units Requirements [40 CFR 60, Subpart Db]

~~Pursuant to 40 CFR 60, Subpart Db, the~~ **The** Permittee shall comply with the provisions of the New Source Performance Standard for Industrial-Commercial-Institutional Steam Generating Units (included as attachment A ~~of~~ **to** ~~this~~ **the operating** permit), **which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above** ~~as specified as follows~~:

(1) 40 CFR 60.40**b** (a) and (j)
(2) 40 CFR 60.41**b**
(3) 40 CFR 60.44**b** (a)(1), (h), and (i)
(4) 40 CFR 60.46**b** (a) and (e)(1)
(5) 40 CFR 60.48**b** (b)(1), (c), (d), (e)(2)(3), and (f)
(6) 40 CFR 60.49**b** (a)(1)(3), (b), (d), (g), (i), (o), (v), and (w)

~~E.1.3 One Time Deadlines Relating to [NSPS 60, Subpart Db]~~

~~(a) Pursuant to §60.46b(e), the Permittee must conduct the initial performance test for Package Boiler #1 no later than 180 days after the initial start-up.~~

~~(b) Pursuant to §60.48b(e), the Permittee must install the NOx CEM prior to the performance test.~~

SECTION E.2 ~~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)~~ **NSPS & NESHAP**

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

(**fff**) **One (1) propylene oxide tank, approved in 2015 for construction, identified as 93-18-S, with a maximum capacity of 28,000 gallons, equipped with a thermal oxidizer (CE93-41-S). This tank also provides propylene oxide to other starch processes.**

(~~nnn~~**fff1**) One (1) 28,000 gallon horizontal propylene oxide tank (Unit ID 93-18-S), installed in 1988, with 95% efficient vapor recovery (liquid nitrogen condenser). This tank also provides propylene oxide to other starch processes.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.2.1 General Provisions Relating to the ~~NSPS for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984~~ **New Source Performance Standards** [326 IAC 12-1] [40 CFR 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1-1 for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or

Modification Commenced after July 23, 1984, **for the emission unit(s) listed above, except** as **otherwise** specified in 40 CFR 60, Subpart Kb.

...

E.2.2 NSPS for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984 [40 CFR 60, Subpart Kb]

~~Pursuant to 40 CFR 60, Subpart Kb, the~~ **The** Permittee shall comply with the provisions of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984 (included as attachment B ~~of~~ **to** ~~this~~ **the operating** permit), **which are incorporated by reference as 326 IAC 12,** ~~as specified as follows~~ **for the emission unit(s) listed above**:

SECTION E.3 ~~NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR ORGANIC LIQUIDS DISTRIBUTION (40 CFR 63, Subpart EEEE)~~ **NSPS & NESHAP**

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

(~~nnn~~**fff**) One propylene oxide tank, approved in 2015 for construction, identified as 93-18-S, with a maximum capacity of 28,000 gallons, equipped with a thermal oxidizer (CE93-41-S). This tank also provides propylene oxide to other starch processes.

(fff1) One (1) 28,000 gallon horizontal propylene oxide tank (Unit ID 93-18-S), installed in 1988, with 95% efficient vapor recovery (liquid nitrogen condenser). This tank also provides propylene oxide to other starch processes.

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

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

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

(a) Pursuant to 40 CFR ~~63.2398~~ **63.1**, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, **for the emission unit(s) listed above, except** as **otherwise** specified in 40 CFR Part 63, Subpart EEEE ~~in accordance with schedule in 40 CFR 63 Subpart EEEE~~.

(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

~~and~~

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

E.3.2 Organic Liquids Distribution NESHAP [326 IAC 20-81][40 CFR Part 63, Subpart EEEE]

The Permittee ~~which engages in organic liquid distribution~~ **shall comply** with the following

provisions of 40 CFR 63, Subpart EEEE (included as Attachment C ~~of~~ **to** ~~this~~ **the operating** permit), **which are incorporated by reference as 326 IAC 20, for the emission units(s) listed above** ~~as specified as follows~~:

...

(15) 40 CFR 63.2386(a), (b), (c)(1-7), (8)(i),(ii), (d)(1), (2)(i), and (e)
(16) 40 CFR 63.2390**(a),** (~~a~~b) and (d)

...

SECTION E.4 ~~NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR MAJOR SOURCES: INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL BOILERS AND PROCESS HEATERS (40 CFR 63, Subpart DDDDD)~~ **NSPS & NESHAP**

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

(~~e~~**ey**) Natural gas-fired Package Boiler #1 (Unit ID 89-03-U), installed in 2006, with a maximum heat input capacity of 247 million Btu/hr, and exhausting to stack S89-03-U. Under NSPS 40 CFR 60 Subpart Db, Package Boiler #1 is a steam-generating unit with a heat input capacity greater than 100 million Btu/hr. **Under NESHAP 40 CFR 63, Subpart DDDDD, this boiler is an existing affected unit.**

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

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

E.4.1 General Provisions Relating to ~~NESHAP DDDDD~~ **National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63** [326 IAC 20-1] [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR ~~63.7565~~ **63.1**, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, **for the emission unit(s) listed above, except** as **otherwise** specified in 40 CFR Part 63, Subpart DDDDD ~~in accordance with schedule in 40 CFR 63 Subpart DDDDD~~.

(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

~~and~~

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

E.4.2 Industrial, Commercial, and Institutional Boilers and Process Heaters NESHAP [326 IAC 20-95][40 CFR Part 63, Subpart DDDDD]

~~Pursuant to 40 CFR 63, Subpart DDDDD, the~~ **The** Permittee shall comply with the **following** provisions of the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (included as ~~a~~**A**ttachment D

~~of~~ **to** ~~this~~ **the operating** permit), **which are incorporated by reference as 326 IAC 20, for the emission unit(s) listed above** ~~as specified as follows~~:

...

SECTION E.5 NSPS & NESHAP

Emissions Unit Description:

Insignificant Activity:

(bb) One (1) diesel-fired emergency generator (compression ignition), identified as 93-41-S, approved in 2016 for construction, with a rating of 496 HP, manufactured after 2009.

Under NSPS, Subpart IIII, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.5.1 General Provisions Relating to the New Source Performance Standards [326 IAC 12-1] [40 CFR 60, Subpart A]

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

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

E.5.2 NSPS for Stationary Compression Ignition Internal Combustion Engines [326 IAC 12-1, 40 CFR 60, Subpart IIII]

The Permittee shall comply with the provisions of the New Source Performance Standards for Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII) (326 IAC 12) (included as Attachment E to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

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

SECTION E.6 NSPS & NESHAP

Emissions Unit Description:

Insignificant Activity:

(bb) One (1) diesel-fired emergency generator (compression ignition), identified as 93-41-S, approved in 2016 for construction, with a rating of 496 HP, manufactured after 2009.

Under NSPS, Subpart IIII, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(cc) One (1) gasoline-fired emergency generator, identified as Generac Model GP5000 (manufactured in 2009, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.16 MMBtu/hr (22.9 HP).

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(dd) One (1) gasoline-fired emergency generator, identified as Honda EU7000 (manufactured in 2014, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.1 MMBtu/hr (14.3 HP).

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

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

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

E.6.1 National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-82][40 CFR 63, Subpart ZZZZ]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment F to the operating permit), which are incorporated by reference as 326 IAC 20, for the emission unit(s) listed above:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585(a) and (b)
(3) 40 CFR 63.6590(a)(2)(ii), (c)(6)
(4) 40 CFR 63.6595(a)(5)
(5) 40 CFR 63.6605
(6) 40 CFR 63.6665
(7) 40 CFR 63.6670
(8) 40 CFR 63.6675

SECTION E.7 NSPS & NESHAP

Emissions Unit Description:

Insignificant Activity:

(cc) One (1) gasoline-fired emergency generator, identified as Generac Model GP5000 (manufactured in 2009, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.16 MMBtu/hr (22.9 HP).

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

(dd) One (1) gasoline-fired emergency generator, identified as Honda EU7000 (manufactured in 2014, displacement of 0.39 liter), approved in 2016 for construction, with a heat input capacity of 0.1 MMBtu/hr (14.3 HP).

Under NSPS, Subpart JJJJ, this unit is considered an affected facility.
Under NESHAP Subpart ZZZZ, this unit is considered an affected source.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.7.1 General Provisions Relating to the New Source Performance Standards [326 IAC 12-1] [40 CFR 60, Subpart A]

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

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

E.7.2 NSPS for Stationary Spark Ignition Internal Combustion Engines [326 IAC 12-1, 40 CFR 60, Subpart JJJJ]

Pursuant to 40 CFR 60, Subpart JJJJ, the Permittee shall comply with the following provisions of the New Source Performance Standards for Spark Ignition Internal Combustion Engines (40 CFR 60, Subpart JJJJ) (326 IAC 12) (included as Attachment G to the operating permit), for the emission unit(s) listed above:

(1) 40 CFR 60.4230(a)(6)
(2) 40 CFR 60.4233(a)
(3) 40 CFR 60.4234
(4) 40 CFR 60.4235
(5) 40 CFR 60.4236(a), (d)
(6) 40 CFR 60.4243(a), (d)
(7) 40 CFR 60.4245
(8) 40 CFR 60.4246
(9) 40 CFR 60.4248
(10) Table 3

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

Source Name: Cargill, Inc.
Source Address: 1100 Indianapolis Blvd,., Hammond, Indiana 46320
Part 70 Permit No.: T089-~~27009~~**36144**-00203
This form consists of 2 pages Page 1 of 2

☐ This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) **daytime** business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- ...

~~INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT~~
~~OFFICE OF AIR QUALITY~~
~~COMPLIANCE AND ENFORCEMENT BRANCH~~
~~100 N. Senate Avenue~~
~~Indianapolis, IN 46204-2251~~
~~Phone: 317-233-0178~~
~~Fax: 317-233-6865~~

~~Part 70 Quarterly Report~~

~~Source Name: Cargill, Inc.~~
~~Source Address: 1100 Indianapolis Blvd, Hammond, Indiana 46320~~
~~Part 70 Permit No.: T089-36144-00203~~
~~Facility: Germ Dryer/Cooler (203-01-G)~~
~~Parameter: Hours of Operation~~
~~Limits: 8,500 hours per twelve (12) consecutive month period, with compliance at the end of each month.~~

~~Quarter _____ YEAR:_____~~

	~~Column 1~~	~~Column 2~~	~~Column 3 Column 1 + Column 2~~
~~Month~~	~~Hours Operated This Month~~	~~Hours Operated Previous 11 Months~~	~~Hours Operated 12 Month Total~~

~~☐ No deviations occurred in this quarter.~~
~~☐ Deviation/s occurred in this quarter.~~

~~Submitted by: _____~~
~~Title/Position: _____~~
~~Signature: _____~~
~~Date: _____~~
~~Phone: _____~~

Conclusion and Recommendation

The construction of this proposed modification and operation of this source shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 089-36416-00203 and Part 70 Renewal No. T089-36144-00203. The staff recommends to the Commissioner that this Part 70 Significant Source Modification and Part 70 Renewal be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Madhurima Moulik at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-0868 or toll free at 1-800-451-6027 extension 3-0868.

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

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

Appendix A: Emissions Calculations
Source Modification PTE Summary of New Units

Company Name: Cargill, Inc.
Address City IN Zip: 1100 Indianapolis Blvd, Hammond, IN 46320
Permit Number: SSM 089-36416-00203/Part 70 Renewal 089-36144-00203
Reviewer: Madhurima Moulik

	Potential to Emit (tons per Year) Unlimited/Uncontrolled									
Unit	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Highest Single HAP	GHGs (CO2e)
New Silos	1,501.71	1,501.71	1,501.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Torpedo Heaters	0.07	0.08	0.07	2.33	0.66	0.01	0.16	1.51E-04	6.90E-05	709.00
Gasoline Generators	0.01	0.01	0.01	0.01	0.11	0.02	0.06	4.55E-03	4.55E-03	10.01
Diesel Generator 93-41-S	0.27	0.27	0.27	0.25	3.84	0.31	0.83	3.36E-03	1.02E-03	1.43E+02
PTE - (before control)	**1,502.06**	**1,502.07**	**1,502.06**	**2.59**	**4.61**	**0.35**	**1.06**	**0.01**	**4.55E-03**	**862.09**

	Potential to Emit (tons per Year) Limited									
Unit	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Highest Single HAP	GHGs (CO2e)
New Silos	24.00	14.02	9.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Torpedo Heaters	0.07	0.08	0.07	2.33	0.66	0.01	0.16	1.51E-04	6.90E-05	709.00
Gasoline Generators	0.01	0.01	0.01	0.01	0.11	0.02	0.06	4.55E-03	4.55E-03	10.01
Diesel Generator 93-41-S	0.27	0.27	0.27	0.25	3.84	0.31	0.83	3.36E-03	1.02E-03	1.43E+02
PTE (after control)	**24.35**	**14.37**	**9.99**	**2.59**	**4.61**	**0.35**	**1.06**	**0.01**	**4.55E-03**	**862.09**

Note:
The new bucket elevators will be added to an existing process and will not affect the throughput or potential to emit of the process/source
They will become part of the existing receiving system with the emissions routed to existing dust collectors no. CE140-05-G.

Appendix A: Emission Calculations
No. 5 and No. 6 Corn Silos

Company Name: Cargill, Inc,
Address City IN Zip: 1100 Indianapolis Blvd, Hammond, IN 46320
Permit Number: SSM 089-36416-00203/Part 70 Renewal 089-36144-00203
Plt ID: 089-00203
Reviewer: Madhurima Moulik

Bucket Elevator No. 2a & 2b is part of emission unit 140-05-G Corn Dump Pit & Receiving

There are no new emissions from the addition of this bucket elevator. It will become part of the exisiting Corn Dump Pit & Receiving System emission unit ID 140-05-G.
This unit will be added inline to the existing receiving system with emissions evacuating to the existing Dust Collector ID No. CE140-05-G
There is no increase in the throughput potential of corn receiving system 140-05-G, the new elevators and storage bins will allow separation of incoming corn types for customer requirements.

New Corn Storage Silos No. 5 and 6 - Emission Unit ID Nos. 140-08-G and 140-09-G

Emission Source Units	Hours of Operation	Max Inlet Grain Loading (gr/acf)	Max Outlet Grain Loading (gr/acf)	Temp (F)	Flow Rate (acfm)	Uncontrolled Emission Factor (lb/hr)	Controlled Emission Factor (lb/hr)	Uncontrolled PM Emissions (tpy)	Control Equip Type	Capture Eff	Control Eff	Controlled PM Emissions (tpy)
No. 5 Corn Silo	8,760	20	0.020	70	1000	171.43	0.17	750.86	Bin Vent	100%	99.9%	0.75
No. 6 Corn Silo	8,760	20	0.020	70	1000	171.43	0.17	750.86	Bin Vent	100%	99.9%	0.75

manufacturer's guarantee

Project Emissions: 1.50 PM/PM10/PM2.5

	Potential-To-Emit (PTE), [tpy]		
Emission Unit	**PM**	**PM10**	**PM2.5**
Bucket Elevators	0	0	0
No. 5 Corn Silo	750.86	750.86	750.86
No. 6 Corn Silo	750.86	750.86	750.86
	1,501.71	1,501.71	1,501.71

	PTE (after control) [tpy]		
Emission Unit	**PM**	**PM10**	**PM2.5**
Bucket Elevators	0	0	0
No. 5 Corn Silo	0.75	0.75	0.75
No. 6 Corn Silo	0.75	0.75	0.75
	1.50	1.50	1.50

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
Maximum Input Rate (<=4.2 MMBtu/hr)

Company Name: **Cargill, Inc,**
Address City IN Zip: **1100 Indianapolis Blvd, Hammond, IN 46320**
Permit Number: **SSM 089-36416-00203/Part 70 Renewal 089-36144-00203**
Plt ID: **089-00203**
Reviewer: **Madhurima Moulik**

B. Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	496.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	248,000

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission in tons/yr	0.27	0.27	0.27	0.25	3.84	0.31	0.83

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

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	8.10E-04	3.55E-04	2.47E-04	3.39E-05	1.02E-03	6.66E-04	8.03E-05	1.46E-04

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

Potential Emission of Total HAPs (tons/yr)	**3.36E-03**

Methodology
Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.15E+00	4.63E-05	9.26E-06
Potential Emission in tons/yr	1.43E+02	5.74E-03	1.15E-03

Summed Potential Emissions in tons/yr	**142.61**
CO2e Total in tons/yr	**143.09**

Methodology
Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2
CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
Maximum Input Rate (<=4.2 MMBtu/hr)

Company Name: **Cargill, Inc,**
Address City IN Zip: **1100 Indianapolis Blvd, Hammond, IN 46320**
Permit Number: **SSM 089-36416-00203/Part 70 Renewal 089-36144-00203**
Plt ID: **089-00203**
Reviewer: **Madhurima Moulik**

Gasoline Fired Emergency Generators

A. Emissions calculated based on heat input capacity (MMBtu/hr)

Heat Input Capacity (MMBtu/hr)	0.26
Maximum Hours Operated per Year	500
Potential Throughput (MMBtu/yr)	130

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.1	0.1	0.1	0.08	1.63	0.36	0.99
Potential Emission in tons/yr	0.01	0.01	0.01	0.01	0.11	0.02	0.06

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

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/MMBtu	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	0.00E+00
Potential Emission in tons/yr	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.55E-03	0.00E+00	0.00E+00

Potential Emission of Total HAPs (tons/yr)	**4.55E-03**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu	1.54E+02	0.00E+00	0.00E+00
Potential Emission in tons/yr	1.00E+01	0.00E+00	0.00E+00

Summed Potential Emissions in tons/yr	**1.00E+01**
CO2e Total in tons/yr	**1.00E+01**

Emission Factors based on AP-42 Table 3.3-1 for Gasoline Industrial Engines

Appendix A: Emissions Calculations
Commercial/Institutional/Residential Combustors (< 100 mmBtu/hr)
#1 and #2 Fuel Oil

Company Name: **Cargill, Inc,**
Address City IN Zip: **1100 Indianapolis Blvd, Hammond, IN 46320**
Permit Number: **SSM 089-36416-00203/Part 70 Renewal 089-36144-00203**
Plt ID: **089-00203**
Reviewer: **Madhurima Moulik**

Six (6) Kerosene Torpedo Heaters

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
1.05	65.7	0.5

	Pollutant						
	PM*	PM10	direct PM2.5	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.0	2.4	2.1	71 *(142.0S)*	20.0	0.34	5.0
Potential Emission in tons/yr	0.07	0.08	0.07	2.33	0.66	0.01	0.16

Methodology
1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu
Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu
Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98 (see erata file)
*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

Hazardous Air Pollutants (HAPs)

	HAPs - Metals				
	Arsenic	Beryllium	Cadmium	Chromium	Lead
Emission Factor in lb/mmBtu	4.0E-06	3.0E-06	3.0E-06	3.0E-06	9.0E-06
Potential Emission in tons/yr	1.8E-05	1.4E-05	1.4E-05	1.4E-05	4.1E-05

	HAPs - Metals (continued)			
	Mercury	Manganese	Nickel	Selenium
Emission Factor in lb/mmBtu	3.0E-06	6.0E-06	3.0E-06	1.5E-05
Potential Emission in tons/yr	1.4E-05	2.8E-05	1.4E-05	6.9E-05

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

Greenhouse Gases (GHGs)

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/kgal	21,500	0.216	0.26
Potential Emission in tons/yr	706	0.01	0.01
Summed Potential Emissions in tons/yr	706		
CO2e Total in tons/yr	709		

Methodology
The CO2 Emission Factor for #1 Fuel Oil is 21500. The CO2 Emission Factor for #2 Fuel Oil is 22300.
Emission Factors are from AP 42, Tables 1.3-3, 1.3-8, and 1.3-12 (SCC 1-03-005-01/02/03) Supplement E 9/99 (see erata file)
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emissions Calculations
Emissions Summary

Company Name: Cargill, Inc.
Address City IN Zip: 1100 Indianapolis Blvd, Hammond, IN 46320
Permit Number: SSM 089-36416-00203/Part 70 Renewal 089-36144-00203
Reviewer: Madhurima Moulik

	Potential to Emit (tons per year) unlimited/uncontrolled After Modification								
Unit/Process	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAP	Highest Single HAP
Existing Equipment - Stack	15630.17	15571.79	15541.84	392.55	324.29	13447.99	573.16	>25	>10
Existing Equipment - uncaptured	4.82	1.33	0.27	27.59	0.00	8.89	0.00	8.89	<10
New Silos	1501.71	1501.71	1501.71	0.00	0.00	0.00	0.00	0.00	0
Torpedo Heaters	0.07	0.08	0.07	2.33	0.66	0.01	0.16	1.51E-04	6.90E-05
Gasoline Emergency Gen	0.01	0.01	0.01	0.01	0.11	0.02	0.06	4.55E-03	4.55E-03
New Emergency Generator	0.27	0.27	0.27	0.25	3.84	0.31	0.83	3.36E-03	1.02E-03
PTE Totals	**17137.04**	**17075.20**	**17044.17**	**422.73**	**328.90**	**13457.22**	**574.22**	**>25**	**>10**

	Potential to Emit (tons per year) Limited/Controlled After SSM 089-36416-00203								
Unit/Process	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAP	Highest Single HAP
Existing Equipment - Stack	155.25	163.72	163.42	436.82	325.42	540.70	544.83	315.97	>10
Existing Equipment - uncaptured	4.11	1.00	0.22	27.59	0.00	8.89	0.00	8.89	<10
Tanks**	0.00	0.00	0.00	2.26	0.00	0.00	0.00	0.00	0
New Silos*	24.00	14.02	9.64	0.00	0.00	0.00	0.00	0.00	0.00
Torpedo Heaters	0.07	0.08	0.07	2.33	0.66	0.01	0.16	1.51E-04	6.90E-05
Gasoline Emergency Gen	0.01	0.01	0.01	0.01	0.11	0.02	0.06	4.55E-03	4.55E-03
New Emergency Generator	0.27	0.27	0.27	0.25	3.84	0.31	0.83	3.36E-03	1.02E-03
PTE Totals	**183.71**	**179.09**	**173.62**	**469.27**	**330.03**	**549.94**	**545.88**	**>25**	**>10**

* Based on limited PSD Minor Limit of PM (2.82 lb/hr), PM-10 1.68 (lb/hr) and PM2.5 (1.11 lb/hr) for each silo
** Includes tanks 93-18-S and 93-18-S-A

Note: The new bucket elevators will exhaust to an existing dust collector CE140-05-G which is shared by existing permitted units. The PTE of these units have not been been estimated separately.

Appendix A: Emissions Calculations

Company Name: Cargill, Inc.
Address City IN Zip: 1100 Indianapolis Blvd, Hammond, IN 46320
Permit Number: SSM 089-36416-00203/Part 70 Renewal 089-36144-00203
Reviewer: Madhurima Moulik

NOTES

EF: EMISSION FACTOR
CE: CONTROL EFFICIENCY
MDR: MAXIMUM DESIGN RATE
MDC: MAXIMUM DESIGN CAPACITY
Ts: STACK DISCHARGE TEMPERATURE
UNITS FOR EMISSIONS ARE IN (TPY) EXCEPT WHERE GIVEN

****

I. Total: Stack Emissions

(Under NG)

	POTENTIAL TO EMIT					
	BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	3569	85645	15630	36	155.2	---
PM10	3555	85325	15572	38	163.7	---
PM2.5	3548	85161	15542	38	163.4	---
SOx	90	2151	393	100	436.8	---
NOx	74	1777	324	74	325.4	---
VOC	3071	73713	13448	123	540.7	---
CO	131	2943	573	124	544.8	---
HAPs (Total)	2952	70839	12930	72	316.0	---

****

II. Total: Uncaptured Emissions

	POTENTIAL TO EMIT					
	BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	16.70	369.63	4.82	16.70	4.11	---
PM10	3.47	73.93	1.33	3.47	1.00	---
PM2.5	0.82	18.15	0.27	0.82	0.22	---
SOx	6.30	151.20	27.59	6.30	27.59	---
NOx	0.00	0.00	0.00	0.00	0.00	---
VOC	2.03	48.72	8.89	2.03	8.89	---
CO	0.00	0.00	0.00	0.00	0.00	---
HAPs (Total)	2.03	48.72	8.89	2.03	8.89	---

****

III. Total: Source Wide Emissions

(Under NG)

	POTENTIAL TO EMIT					
	BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	3585.24	86014.27	15634.98	52.88	159.36	---
PM10	3558.68	85398.78	15573.13	41.58	164.72	---
PM2.5	3549.18	85178.84	15542.10	38.85	163.63	---
SOx	95.92	2302.14	420.14	106.29	464.41	---
NOx	74.04	1776.94	324.29	74.04	325.42	---
VOC	3073.51	73761.66	13456.88	125.48	549.59	---
CO	130.86	2942.59	573.16	124.39	544.83	---
HAPs (Total)	2953.98	70887.76	12938.41	74.17	324.86	---

****

General Plant Area - Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203

****

Anaerobic Wastewater Treatment Process
CNTRL DEV: Biogas Flare (800-05-E)
Stack ID S800-05-E

MDR (lbs/hr): 2039
YEARLY PROD (lbs/yr): N/A

STACK ID (DIAM:HEIGHT): (0.67: 16)
FLOWRATE (ACFM): 1000
Ts(°F): 1400

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 3-02-999-99			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(lb/lb)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0	0	0.00	0.00	0.00		0.00	0.00	0.00
PM10	0	0	0.00	0.00	0.00		0.00	0.00	0.00
PM2.5	0	0	0.00	0.00	0.00		0.00	0.00	0.00
SOx	0	0	0.00	0.00	0.00		19.14	83.85	N/A
NOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
VOC	0	0.98	39.00	936.00	170.82		0.78	3.42	N/A
CO	0	0	0.00	0.00	0.00		1.71	7.49	N/A
HAPs (H2S)	0.005	0.999	10.20	244.68	44.65		0.010	0.04	N/A

Groth (Model #8391A), Installed: 7/95
H2S emissions originate from the anaerobic generator.
MDR is pounds per hour of biogas sent to a process burner or biogas flare for conversion to SO2.
Average H2S concentration is less than 0.5% in biogas stream
Virtually all H2S converted to SO2 at plant process burner or biogas flare 99.99% of the time (normal operating procedure) biogas goes to in-plant process burner - H2S PTE is less than 0.05 TPY.
Note - After control emissions for VOC, CO, and HAPs are dervied from an AP-42 emisssion factor

biogas = 480 scf/m = 28800 scf/hr
28800 scf/hr x 0.0708 lbs/scf = 2039 lbs/hr biogas
2039 lbs/hr @ 0.5% H2S = 10 lbs/hr x 8760hr/yr = 87600 lbs/yr = 43 TPY

H2S Combustion Reaction

2 H2S + 3 O2 2 SO2 + 2 H2O
MW H2S = 34.08
MW SO2 = 64.06

Assuming 99.9% conversion from H2S to SO2

10.20	(lb/hr) *	99.9%	=	10.18	(lb/hr) H2S		
10.18	(lb/hr) *	64.06	/	34.08	=	19.14	(lb/hr) of SO2

****

General Plant Area - Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203

Unit WWTP Centrifuge - North
CNTRL DEV: None

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	lb/day	ton/yr
WWTP Centrifuge - North	2	1000	5	70	996	946	0.01	0.31	0.06

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44
100% of VOC is HAPs for this unit.

****

Unit WWTP Centrifuge - South
CNTRL DEV: None

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	lb/day	ton/yr
WWTP Centrifuge - South	2	1000	5	70	996	946	0.01	0.31	0.06

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44
100% of VOC is HAPs for this unit.

****

Paved Roads and Areas (Unit ID 800-04-E-F)
P2,S1

Emission Factor (EF) Equation[1]

EF (lb/VMT) = [k * sL ^ 0.91 * W ^ 1.02] * (1-P/4N)

k =	Particle size multiplier =	0.011	for TSP	(lb/VMT)
		0.0022	for PM10	(lb/VMT)
		0.00054	for PM-2.5	(lb/VMT)
sL =	Silt loading (g/m^2) =	1.1	Table 13.2.1-3, Mean	
W =	Vehicle weight (tons) =	see Table below		
P =	number of days during the averaging period with at least 0.01 in of precipitation =	120	Figure 13.2.1-2	
N =	number of days in the averaging period =	365		

Average

TSP/PM10/PM2.5 Emissions Calculation

Vehicle Traffic	Average Vehicles/day	Empty Weight tons	Loaded Weight tons	Average Vehicle Weight tons	TSP Emission Factor lbs/VMT	PM-10 Emission Factor lbs/VMT	PM-2.5 Emission Factor lbs/VMT	Number of Trips trips/yr	Total Trip Distance miles	Vehicle Mile Traveled mile/yr	Uncontrolled TSP Emissions ton/yr	Uncontrolled PM-10 Emissions ton/yr	Uncontrolled PM-2.5 Emissions ton/yr
Employee [2]	210	1.5	1.5	1.5	0.02	0.00	0.00	76,650	0.34	26,061	0.217	0.043	0.011
Feed Trucks	5	18	40	29.0	0.34	0.07	0.02	1,825	0.81	1,478	0.252	0.050	0.012
Germ Trucks	3	18	40	29.0	0.34	0.07	0.02	1,095	1.21	1,325	0.226	0.045	0.011
Gluten Trucks	1	18	40	29.0	0.34	0.07	0.02	365	1.21	442	0.075	0.015	0.004
Syrup Trucks	3	18	40	29.0	0.34	0.07	0.02	1,095	0.46	504	0.086	0.017	0.004
Starch Trucks	5	18	40	29.0	0.34	0.07	0.02	1,825	0.85	1,551	0.265	0.053	0.013
Chemical Truc	2	18	40	29.0	0.34	0.07	0.02	730	1.1	803	0.137	0.027	0.007
Bagged Products Trucks	25	18	40	29.0	0.34	0.07	0.02	9,125	0.93	8,486	1.449	0.290	0.071
Corn Trucks	48	18	40	29.0	0.34	0.07	0.02	17,520	0.27	4,730	0.808	0.162	0.040
							Total	**Uncontrolled Emissions (tons/yr)**			3.516	0.703	0.173

1. AP-42, Chapter 13.2.1 Paved Roads, January 2011.
2. Includes cars, pick-up trucks and SUVs.

****

Non-combustible Source-wide SO2 emissions (Unit ID 800-06-E)

P2,S3

MDR (Tons produced/hr): N/A

YEARLY PROD (T/yr): N/A

STACK ID (DIAM:HEIGHT): N/A

FLOWRATE (ACFM): N/A

Ts(°F): N/A

CNTRL DEV: None

PERMITTED OPERATING HRS: 8760 hr/yr

	(Stack)		POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0	0	0.0000	0	0.0000		0.0000	0.0000	0.0000
PM10	0	0	0.0000	0	0.0000		0.0000	0.0000	0.0000
PM2.5	0	0	0.0000	0	0.0000		0.0000	0.0000	0.0000
SOx		0	78.1000	1,874.4000	342.0780		78.1000	342.0780	N/A
NOx	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
VOC	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
CO	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
HAPs	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A

	(Fugitive)		POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0	0	0.0000	0	0.0000		0.0000	0.0000	0.0000
PM10	0	0	0.0000	0	0.0000		0.0000	0.0000	0.0000
PM2.5	0	0	0.0000	0	0.0000		0.0000	0.0000	0.0000
SOx		0	6.3000	151.2000	27.5940		6.3000	27.5940	N/A
NOx	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
VOC	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
CO	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
HAPs	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A

Cargill's study of SO2 emissions from various plant areas has derived 78.1 lbs/hr stack and 6.3 lbs/hr uncaptured.
84.4 lbs/hr; 369.67 TPY from various building fugitives and tanks based on engineering estimates.

****

Total: Stack Emissions - General Plant

	POTENTIAL TO EMIT						
	BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.000	0.000	0.00		0.000	0.00	0.000
PM10	0.000	0.000	0.00		0.000	0.00	0.000
PM2.5	0.000	0.000	0.00		0.000	0.00	0.000
SOx	78.100	1,874.400	342.08		97.244	425.93	N/A
NOx	0.000	0.000	0.00		0.000	0.00	N/A
VOC	39.000	936.000	170.82		0.780	3.42	N/A
CO	0.000	0.000	0.00		1.710	7.49	N/A
HAPs	10.195	244.680	44.65		0.010	0.04	N/A

Total: Uncaptured Emissions - General Plant

	POTENTIAL TO EMIT						
	BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	15.401	369.630	3.52		15.401	3.52	N/A
PM10	3.080	73.926	0.70		3.080	0.70	N/A
PM2.5	0.756	18.145	0.17		0.756	0.17	N/A
SOx	6.300	151.200	27.59		6.300	27.59	N/A
NOx	0.000	0.000	0.00		0.000	0.00	N/A
VOC	0.000	0.000	0.00		0.000	0.00	N/A
CO	0.000	0.000	0.00		0.000	0.00	N/A
HAPs	0.000	0.000	0.00		0.000	0.00	N/A

Total: Emissions - General Plant

	POTENTIAL TO EMIT						
	BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	15.401	369.630	3.52		15.401	3.52	0.000
PM10	3.080	73.926	0.70		3.080	0.70	0.000
PM2.5	0.756	18.145	0.17		0.756	0.17	0.000
SOx	84.400	2,025.600	369.67		103.544	453.52	N/A
NOx	0.000	0.000	0.00		0.000	0.00	N/A
VOC	39.000	936.000	170.82		0.780	3.42	N/A
CO	0.000	0.000	0.00		1.710	7.49	N/A
HAPs	10.195	244.680	44.65		0.010	0.04	N/A

****

Cargill, Inc. - SSM 089-36416-00203/Part 70 089-36144-00203 - Feed Pile - Wind Erosion

****

Emission Factor Calculation[1]

Month	Day	Fastest Mile (U^+)[2] (mph)	Daily[3] $u^* = 0.02xU^+_{10}$ (mph)	Daily[3] $u^* = 0.02xU^+_{10}$ (m/s)	Daily[3] $u^* = 0.06xU^+_{10}$ (mph)	Daily[3] $u^* = 0.06xU^+_{10}$ (m/s)	Daily[3] $u^* = 0.09xU^+_{10}$ (mph)	Daily[3] $u^* = 0.09xU^+_{10}$ (m/s)	Erosion Potential[4] $P = 58 * (u^*-u^*_t)^2 + 25 * (u^* - u^*_t)$ Pi, (g/m^2)	40% of Pile	48% of Pile	12% of Pile
March	1	23	0.48	0.22	1.45	0.65	2.18	0.97	0.00	0.00	0.00	0.00
March	2	24.2	0.51	0.23	1.53	0.68	2.29	1.02	0.00	0.00	0.00	0.00
March	3	29.3	0.62	0.28	1.85	0.83	2.77	1.24	0.00	0.00	0.00	3.82
March	4	34.4	0.72	0.32	2.17	0.97	3.26	1.46	0.00	0.00	0.00	14.91
March	5	32.2	0.68	0.30	2.03	0.91	3.05	1.36	0.00	0.00	0.00	9.47
March	6	32.2	0.68	0.30	2.03	0.91	3.05	1.36	0.00	0.00	0.00	9.47
March	7	20.8	0.44	0.20	1.31	0.59	1.97	0.88	0.00	0.00	0.00	0.00
March	8	23	0.48	0.22	1.45	0.65	2.18	0.97	0.00	0.00	0.00	0.00
March	9	20.8	0.44	0.20	1.31	0.59	1.97	0.88	0.00	0.00	0.00	0.00
March	10	28.9	0.61	0.27	1.82	0.82	2.74	1.22	0.00	0.00	0.00	3.18
March	11	25.3	0.53	0.24	1.60	0.71	2.39	1.07	0.00	0.00	0.00	0.00
March	12	29.9	0.63	0.28	1.89	0.84	2.83	1.27	0.00	0.00	0.00	4.85
March	13	29.9	0.63	0.28	1.89	0.84	2.83	1.27	0.00	0.00	0.00	4.85
March	14	23	0.48	0.22	1.45	0.65	2.18	0.97	0.00	0.00	0.00	0.00
March	15	29.9	0.63	0.28	1.89	0.84	2.83	1.27	0.00	0.00	0.00	4.85
March	16	34.4	0.72	0.32	2.17	0.97	3.26	1.46	0.00	0.00	0.00	14.91
March	17	25.3	0.53	0.24	1.60	0.71	2.39	1.07	0.00	0.00	0.00	0.00
March	18	20.8	0.44	0.20	1.31	0.59	1.97	0.88	0.00	0.00	0.00	0.00
March	19	23	0.48	0.22	1.45	0.65	2.18	0.97	0.00	0.00	0.00	0.00
March	20	23.6	0.50	0.22	1.49	0.67	2.23	1.00	0.00	0.00	0.00	0.00
March	21	24.2	0.51	0.23	1.53	0.68	2.29	1.02	0.00	0.00	0.00	0.00
March	22	22.5	0.47	0.21	1.42	0.63	2.13	0.95	0.00	0.00	0.00	0.00
March	23	20.8	0.44	0.20	1.31	0.59	1.97	0.88	0.00	0.00	0.00	0.00
March	24	25.3	0.53	0.24	1.60	0.71	2.39	1.07	0.00	0.00	0.00	0.00
March	25	23	0.48	0.22	1.45	0.65	2.18	0.97	0.00	0.00	0.00	0.00
March	26	23	0.48	0.22	1.45	0.65	2.18	0.97	0.00	0.00	0.00	0.00
March	27	20.7	0.44	0.19	1.31	0.58	1.96	0.88	0.00	0.00	0.00	0.00
March	28	18.3	0.38	0.17	1.15	0.52	1.73	0.77	0.00	0.00	0.00	0.00
March	29	20.7	0.44	0.19	1.31	0.58	1.96	0.88	0.00	0.00	0.00	0.00
March	30	23	0.48	0.22	1.45	0.65	2.18	0.97	0.00	0.00	0.00	0.00
March	31	23	0.48	0.22	1.45	0.65	2.18	0.97	0.00	0.00	0.00	0.00

General Plant Area - Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203

Threshold wind speed (u*)[5]	1.12	m/s	AP-42 Table 13.2.5-2
Convert threshold to equiv fastest mile (mph)	45.59	mph	
Roughness length (z_0)[5]	0.003	m	AP-42 Table 13.2.5-2
Measurement anemometer height (z_a)	6.71	m	Gary, Indiana
No. disturbances per day	50		Estimate
Percent of area disturbed between events	100	%	Conservative
Control efficiency	0	%	None

Fiber Pile Potential TSP/PM10/PM2.5 Emissions (based on 8,760 hours per year)

Height of Pile	6.1	m
Diameter of Pile	3.81	m
Surface area of pile [6]	86	m^2

	40% of Pile	48% of Pile	12% of Pile	Total	
Uncontrolled TSP Emissions	**0.000**	**0.000**	**0.471**	**0.471**	**(tons/year)**
Uncontrolled PM-10 Emissions	**0.000**	**0.000**	**0.236**	**0.236**	**(tons/year)**
Uncontrolled PM-2.5 Emissions	**0.000**	**0.000**	**0.035**	**0.035**	**(tons/year)**
Controlled TSP Emissions	**0.000**	**0.000**	**0.471**	**0.471**	**(tons/year)**
Controlled PM-10 Emissions	**0.000**	**0.000**	**0.236**	**0.236**	**(tons/year)**
Controlled PM-2.5 Emissions	**0.000**	**0.000**	**0.035**	**0.035**	**(tons/year)**

1. AP-42, Chapter 13.2.5 Industrial Wind Erosion, November 2006.
2. Maximum wind gusts in March 2001 (usually the windiest month of the year) were utilized for Gary, IN from NCDC website.
3. us/ur = 0.2 for 40%, us/ur = 0.6 for 48%, and us/ur = 0.9 for 12% of elevated pile surface area from AP-42, Chp. 13.2.5
4. Equation from AP-42, Chp. 13.2.5 = P = 58 * (u*-u*t)^2 + 25 * (u* - u*t)
5. Assumed uncrusted coal pile similar to fiber pile.

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Cargill, Inc. 089-36416-00203/Part 70 089-36144-00203 Material Transfer - Fugitive Emissions

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Emission Factor (EF) Equation[1]

EF (lb/ton) =	k * 0.0032 * ((U / 5) ^ 1.3 / (M/2) ^ 1.4)		
k =	Particle size multiplier =	0.74	for TSP
		0.35	for PM-10
		0.053	for PM-2.5
U =	mean wind speed, mph =	10.3	44 year average ending 2002 for Chicago, IL
M =	material moisture content, % =	15	Corn
M =	material moisture content, % =	40	Fiber
M =	material moisture content, % =	4	Germ
M =	material moisture content, % =	9.5	Gluten
M =	material moisture content, % =	15	Cracked Corn

Material Transfer Emission Factor =	**3.61E-04**	**lb TSP/ton Corn**	**Materials**	21,900,000	bu/yr
	1.71E-04	**lb PM-10/ton Corn**		56	lbs/bu - corn
	2.58E-05	**lb PM-2.5/ton Corn**		6.47	lbs/bu - fiber
				3.36	lb/bu - germ
	9.14E-05	**lb TSP/ton Fiber**		2.2	lb/bu - gluten
	4.32E-05	**lb PM-10/ton Fiber**		1.84	lb/bu - cracked corn
	6.55E-06	**lb PM-2.5/ton Fiber**			
				613,200	Ton/yr corn
	2.30E-03	**lb TSP/ton Germ**		70,847	ton/yr fiber
	1.09E-03	**lb PM-10/ton Germ**		36,792	ton/yr germ
	1.64E-04	**lb PM-2.5/ton Germ**		24,090	ton/yr gluten
				20,148	ton/yr cracked corn
	6.84E-04	**lb TSP/ton Gluten**			
	3.24E-04	**lb PM-10/ton Gluten**			
	4.90E-05	**lb PM-2.5/ton Gluten**			
	3.61E-04	**lb TSP/ton Cracked Corn**			
	1.71E-04	**lb PM-10/ton Cracked Corn**			
	2.58E-05	**lb PM-2.5/ton Cracked Corn**			

TSP/PM10/PM2.5 Emissions Calculation
Annual emissions based on maximum transfer rates

Transfer Description	Maximum Material Transferred ton/yr	Potential Uncontr. TSP Emissions ton/yr	Potential Uncontr PM-10 Emissions ton/yr	Potential Uncontr. PM-2.5 Emissions ton/yr	Control Method	Control Efficiency [2] %	Potential Controlled TSP Emission ton/yr	Potential Controlled PM-10 Emission ton/yr	Potential Controlled PM-2.5 Emission ton/yr
Corn Unloading	613,200	0.111	0.052	0.008	Baghouse/ building	75%	0.028	0.013	0.002
Corn Transfer to Silos	613,200	0.111	0.052	0.008	Baghouse/ building	75%	0.028	0.013	0.002
Corn Transfer from Silos	613,200	0.111	0.052	0.008	Baghouse/ building	95%	0.006	0.003	0.000
Corn Transfer to Process (3 locations)	613,200	0.332	0.157	0.024	Baghouse/ building	95%	0.017	0.008	0.001
Texas Shaker	613,200	0.111	0.052	0.008	Baghouse/ building	75%	0.028	0.013	0.002
Fiber Transfer	70,847	0.003	0.002	0.000	Partial Enclosure	0%	0.003	0.002	0.000
Germ Loadout	36,792	0.042	0.020	0.003	Baghouse/ building	75%	0.011	0.005	0.001
Gluten Loadout	24,090	0.008	0.004	0.001	Baghouse/ building	75%	0.002	0.001	0.000
Cracked Corn Loadout	20,148	0.004	0.002	0.000	None	0%	0.004	0.002	0.000
Total Material Transfers	**Uncontrolled Potential Emissions**	**0.832**	**0.393**	**0.059**	**Controlled Potential Emissions**		**0.125**	**0.059**	**0.009**

Notes:
1. AP-42, Chapter 13.2.4, November 2006.
2. Control Efficiencies based on Technical Background Document on Control of Fugitive Dust at Cement Manufacturing Facilities, March 1998

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Cargill, Inc. 089-36416-00203/Part 70 089-36144-00203 Alternate Carbohydrate Area

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P1;S3: No 1. and No. 2 Alternate Carbohydrate Storage Bins — MDR (T/hr): 30 — STACK ID (DIAM:HEIGHT): 1'; 180'
(Unit Ids 127-28-B and 127-29-B respectively) — YEARLY PROD (T/yr): 262800 — FLOWRATE (ACFM): 2300
CNTRL DEV: Bag Filter Dust Collectors (CE127-28-B and CE127-29-B) — Ts(°F): 120

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-014-01			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/hr)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0.18	0.99	5.4000	129.60	23.6520	0.0540	0.2365	0.003
PM10	0.18	0.99	5.4000	129.60	23.6520	0.0540	0.2365	0.003
PM2.5	0.180	0.99	5.4000	129.60	23.6520	0.0540	0.2365	0.003
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

EF: based on manufacture's specifications provided by the source in SPM No. 089-25259-00203
*No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

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P1;S4: Alternate Carbohydrate Feeder Hopper (127-30-B) — MDR (T/hr): 0.836 — STACK ID (DIAM:HEIGHT): 1'; 155'
YEARLY PROD (T/yr): 7318.98 — FLOWRATE (ACFM): 380
CNTRL DEV: Bag Filter Dust Collector (CE127-30-B) — Ts(°F): 160

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-014-01			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0.028	0.99	0.0234	0.5615	0.1025	0.0002	0.0010	0.000
PM10	0.028	0.99	0.0234	0.5615	0.1025	0.0002	0.0010	0.000
PM2.5	0.028	0.99	0.0234	0.5615	0.1025	0.0002	0.0010	0.000
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

EF: based on manufacture's specifications provided by the source in SPM No. 089-25259-00203
*No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

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P1,S2; Vacuum Cleaner #1, #2 — MDR (T/hr): 0.3 — STACK ID (DIAM:HEIGHT): 1'; 4'
(127-21-B, 127-22-B) — YEARLY PROD (T/yr): 2628 — FLOWRATE (ACFM): 360
CNTRL DEV: Bag Filter Dust Collectors (CE127-21-B and CE127-22-B) — Ts(°F): 70

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 3-02-999-99			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	10.29	0.99	3.0857	74.0571	13.5154	0.0309	0.1352	0.0100
PM10	10.29	0.99	3.0857	74.0571	13.5154	0.0309	0.1352	0.0100
PM2.5	10.286	0.99	3.0857	74.0571	13.5154	0.0309	0.1352	0.010
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
*No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

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Total: Stack Emissions - Alternate Carbohydrate Area

	POTENTIAL TO EMIT					
	BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	8.509	204.219	37.270	0.085	0.373	0.013
PM10	8.509	204.219	37.270	0.085	0.373	0.013
PM2.5	8.509	204.219	37.270	0.085	0.373	0.013
SOx	0.000	0.000	0.000	0.000	0.000	N/A
NOx	0.000	0.000	0.000	0.000	0.000	N/A
VOC	0.000	0.000	0.000	0.000	0.000	N/A
CO	0.000	0.000	0.000	0.000	0.000	N/A
HAPs	0.000	0.000	0.000	0.000	0.000	N/A

Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203

2004 Steep Tank Bag Sample and Analysis Testing
Grind Area Steeping Tanks
Using Equations from AP-42, 7.1, Sept 1997.

Eqn 1-1: Lt = Ls + Lw = Total Losses from Vertical Fixed Roof Tanks, lb
Ls = standing storage losses, lb
Lw = working losses, lb

Estimate Standing Losses

Eqn 1-2: Ls = 365*Vv*Wv*Ke*Ks = Standing Storage Loss, lb — Ls = 127.79 lbs vapor
Vv = vapor space volume, ft^3
Wv = vapor density, lb/ft^3
Ke = vapor space expansion factor, dimensionless
Ks = vented vapor saturation factor, dimensionless
365 = constant, d

Calculate Vapor Space Volume:

Eqn 1-3: Vv = π/4*D^2*Hvo = Vapor Space Volume, ft^3 — Vv = 805.8 ft
D = tank diameter, ft — D = 18 ft
Hvo = vapor space outage, ft
Eqn 1-4: Hvo = (Hs - Hl) + Hro = Vapor Space Outage for Conical Tank, ft — Hvo = 3.17 ft
Hs - Hl = distance from top of liquid level to base of conical tank top, ft — Hs - Hl = 2.5 ft
Hro = roof outage, ft = 1/3 Hr — Hro = 0.67 ft
Hr = height of the conical roof, ft — Hr = 2.0 ft

Calculate Vapor Density:

Eqn 1-9: Wv = Mv*Pva / R*Tla = Vapor Density, lb/ft^3 — Wv = 0.0638 lb/ft^3
Mv = vapor molecular weight in the vapor space, lb/lb-mole
R = ideal gas constant, psia*ft^3/lb-mole*R — R = 10.731 psia-ft^3/lb-mole-°R
Pva = vapor pressure at daily avg liquid surface temp, psia
Tla = daily avg liquid surface temp, °R — Tla = 593 °R (range is 126-140F)
Vapor in headspace is at atm pressure, psia — Patm = 14.696 psia
Vapor consists of 3 components: — Pva = 14.696 psia (same as atmospheric)
Water vapor partial pressure from steam tables @ 140F — Pwater = 2.889 psia
SO2 vapor partial pressure (using heavy steep SO2 conc):
1200 ppm = 1200 mg SO2/liter sol'n = 1.2 g SO2/liter sol'n
1 liter of sol'n weights 1000 g
1000 g sol'n - 1.2 g SO2 = 998.8 g water
1.2 g SO2/998.8 g water = 0.120 g SO2/100 g water
From Perry's Chem Egnr Handbook, table 2-11, p.2-77, 7th ed.
use partial pressure of SO2 over a solution @ 140F
of 17.14 mmHg. — P_{SO2} = 17.1429 mmHg (Perry's Handbook)
17.14 / 760 * 14.636 = 0.3301 psia — P_{SO2} = 0.3301 psia
Pva = total pressure of liquid stored, psia = ΣPi
Pi = partial pressure of vapor component gas
yi = Pi / ΣPi = Pi / Pva
yi = vapor mole (volume) fraction of vapor component gas
Mi = molecular weight of vapor component gas
Mv = ΣMi*yi = molecular weight of vapor
mi = Mi*yi / ΣMi*yi = Mi*yi / Mv
mi = mass fraction of vapor component gas in the vapor

Vapor Component Gas	Partial Pressure of Vapor Component Gas, psia (Pi)	Fraction (volume) of Vapor Component Gas, mol gas/mol vapor (yi)	Molecular Weight of Vapor Component Gas, lb/lb-mole (Mi)	Molecular Weight of Vapor, lb/lb-mole (ΣMi*yi=Mv)	Vapor Mass Fraction, lb gas/lb vapor (mi)
SO2	0.3301	0.0225	64	27.624	0.0520
Water	2.889	0.1966	18	27.624	0.1281
Air	11.477	0.7810	29	27.624	0.8199
Totals	14.696	1.0000	-----	-----	1.0000

Mv = 27.624 lb/lb-mole

Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203

Calculate Vapor Space Expansion Factor:

Eqn 1-16: Ke = ΔTv/Tla + (ΔPv-ΔPb)/(Pa-Pva)

ΔTv = daily vapor temp range, °R

ΔPv = daily vapor pressure range, psi

ΔPb = breather vent pressure setting range, psi

Pa = atmospheric pressure, psia

Pva = vapor pressure at daily avg liquid surface temp, psia

Tla = daily avg liquid surface temp, °R

Ke =	0.024	
ΔTv =	14	°R (use same as surface temp)
ΔPv =	0	negligible at 126-140F range
ΔPb =	0	vents are open
Pa =	14.696	psia
Pva =	14.696	psia
Tla =	593	°R

Calculate Vented Vapor Saturation Factor:

Eqn 1-22: Ks = 1 / (1+ 0.053Pva*Hvo) = Vented Vapor Saturation Factor, dimensionless

Pva = vapor pressure at daily avg liquid surface temp, psia

Hvo = vapor space outage, ft

Ks =	0.2885	
Pva =	14.696	psia
Hvo =	3.17	ft

Calculate SO2 Release from Standing Losses:

Mass fraction of SO2 in vapor = mi (see above)

SO2 release = mi_{SO2} x Ls

SO2 release from standing losses = 6.6511 lbs SO2/year per tank

negligible

mi_{SO2} =	0.0520	lb SO2/lb vapor (see table)
Ls =	127.792	lbs vapor (see above)

SO2 Release from Standing Losses:

Future SO2 release = 6.6511 lbs SO2/year per tank * 8760 tanks/year

Baseline SO2 release = 159.63 lbs SO2/year

0.08 tons SO2/year

120000	bushels/day throughput rate
5000	bushels capacity/tank
24	tanks/day for steeping

Estimate Working Losses

Each steep tank holds 5000 bushels of corn.

in steeping and "empty/fill" steeping process.

No. of Tanks = daily throughput, bushels/day / 5000 bushels/tank

120000	bushels/day throughput rate
5000	bushels capacity/tank
13	cycles/tank
24.0	tanks/day for steeping

Assuming 365 days in operation for steeping process and 13 cycles per day per tank, calculate the total number of cycles per year for

Cycles per year = No. of tanks/day x 13 cycles/tank x 365 days

365	days steeping operation
113880	total cycles

Calculate Volume of Vapor Displaced from Each Tank During Each Cycle:

Estimate the height of the corn fill line in the tank using tank dimensions:

Vc = tank corn capacity / density of corn

Volume of bottom of a cone:

Vbcn = 1/3*π/4*D^2*Hcn

Remaining volume of corn:

Vcr = volume of corn/tank - volume of the cone

Height in cylindrical section of the tank:

Vcr = π/4*D^2*Hcyl

Hcyl = Vcr*4/πD^2

Volume above the corn fill line in the cylindrical section:

Vacf = π/4*D^2*Hacf

Volume of conical roof:

Vcrf = 1/3*π/4*D^2*Hcrf

Total volume above the corn fill line:

Vt = Vacf + Vcrf

ρ_c =	0.8	bushels corn/ft^3
Hc =	6250	ft^3 corn/tank
D =	18	ft (measured)
Hcn =	8.5	ft (measured)
Vbc =	721.0	ft^3
Vcr =	5529.0	ft^3 corn remaining
Hcyl =	21.73	ft (calculated)
Hacf =	4.3	ft (measured)
Vacf =	1094.22	ft^3
Hcrf =	2	ft (measured)
Vcrf =	169.65	ft^3
Vt =	1263.86	ft^3 (volume per cycle)

Calculate the Total Volume of the Vapor Displaced Annually:

Vvap = No. of cycles * volume per cycle

Vvap = 143,928,687 ft^3

Calculate SO2 Released From Working Losses of Vented Vapor:

time was sampled in October 2004.

Calculate the Volume Occupied by One Mole at 140F:

V = nRT/p

Calculate the Vapor Density:

ρ_v = 100 ft^3 SO2 x 1 mole SO2 x 64 lbs SO2 / 10^6 ft^3 vapor x V x 1 mole SO2

SO2 release = ρ_v x Vvap

SO2 Releases from Working Losses = 2,102.85 lbs SO2

SO2 =	100	ppm
	100 ft^3 of SO2/10^6 ft^3 of vapor	
T =	600	°R
R =	1545	psfa-ft^3/lb-mol-R
V =	438.04	ft^3
ρ_v =	1.5E-05	lbs SO2/ft^3 vapor

Total SO2 Releases:	2,262.48	lbs SO2/year
	1.1312	tons SO2/year
	0.2583	lb/hr
	6.20	lb/day

Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Grind and Feedhouse Area

Gluten Dryer System (121-01-G)

Max Throughput (lb/hr) 15800

MDR Throughput (tons/hr) 7.9

Annual Throughput (tons/yr): 69204

STACK ID (DIAM:HEIGHT): 3'; 100'

FLOWRATE (ACFM): 9,570

Ts(°F): 179

CNTRL DEV: Scrubber (CE121-01-G)

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-54			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	4.50	0.94	35.55	853.20	155.71		2.13	9.34	0.03
PM10	4.50	0.94	35.55	853.20	155.71		2.13	9.34	0.03
PM2.5	4.50	0.94	35.55	853.20	155.71		2.13	9.34	0.03
SOx*	0.609	0.8	4.81	115.47	21.07		0.96	4.21	N/A
NOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
VOC**	0	0.5	6.51	156.24	28.51		3.26	14.26	N/A
CO*	0.3727	0	2.94	70.66	12.90		2.94	12.90	N/A
HAPs	0	0.5	1.63	39.12	7.14		0.82	3.57	N/A

Particulate EF: back calculated using manufacturer's specifications of 0.03 gr/dscf grain loading
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.
*Emission Factors are based on stack test data from the source.
**Emission rate based on a 0.00112 lb VOC/bu factor applied to a 140,000 bu/day production factor.

Gluten Dryer (121-01-G)
In-Process Fuel Combustion

MDC (mmBtu/hr): 12.5

MDR (mmcft/hr): 0.0123

HEAT CONTENT (Btu/cft): 1020

QTY BURNED (mmcft/yr): 41.03

STACK ID (DIAM:HEIGHT): 3'; 100'

FLOWRATE (ACFM): 9,570

Ts(°F): 179

CNTRL DEV: Scrubber (CE121-01-G)

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-54			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	1.9	0.94	0.02	0.56	0.10		0.00	0.01	0.00
PM10	7.6	0.94	0.09	2.24	0.41		0.01	0.02	0.00
PM2.5	7.6	0.94	0.09	2.24	0.41		0.01	0.02	0.00
SOx	0.6	0.8	0.01	0.18	0.03		0.00	0.01	N/A
NOx	100	0	1.23	29.41	5.37		1.23	5.37	N/A
VOC	5.5	0.5	0.07	1.62	0.30		0.03	0.15	N/A
CO	84	0	1.03	24.71	4.51		1.03	4.51	N/A
Worst Single HAP	1.8	0.5	0.02	0.53	0.10		0.01	0.05	N/A

E.F. based on AP-42 and 40 CFR 98.
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.
Emissions based on company's submittal of 8760 hours/year

Total: Gluten Dryer System

	POTENTIAL TO EMIT						
	BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	35.57	853.76	155.81		2.13	9.35	0.03
PM10	35.64	855.44	156.12		2.14	9.37	0.03
PM2.5	35.64	855.44	156.12		2.14	9.37	0.03
SOx	4.82	115.64	21.10		0.96	4.22	N/A
NOx	1.23	29.41	5.37		1.23	5.37	N/A
VOC	6.58	157.86	28.81		3.29	14.40	N/A
CO	3.97	95.37	17.40		3.97	17.40	N/A
HAPs	1.65	39.65	7.24		0.83	3.62	N/A

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Cargill, Inc. SSM 089-36178-00203/Part 70 Renewal 089-36144-00203 Grind and Feedhouse Area

Germ Tank 1110 — MDR (T/hr): 15 — STACK ID (DIAM:HEIGHT): 1': 94
(200-03-G) — YEARLY PROD (T/yr): 131,400 — FLOWRATE (ACFM): 1200
CNTRL DEV: Dust Collector (CE200-03-G) — Ts(°F): 140

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-52			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0.30	0.99	4.54	109.03	19.90	0.045	0.199	0.005
PM10	0.30	0.99	4.54	109.03	19.90	0.045	0.199	0.005
PM2.5	0.30	0.99	4.54	109.03	19.90	0.045	0.199	0.005
SOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A
NOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A
VOC	0	0	0.16	3.74	0.68	0.156	0.682	N/A
CO	0	0	0.00	0.00	0.00	0.000	0.000	N/A
HAPs	0	0	0.00	0.00	0.00	0.000	0.000	N/A

EF: back calculated using manufacturer's specifications of 0.005 gr/dscf grain loading
Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
200-03-G	20	1200	5	70	1195	1136	0.16	0.68

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Gluten Tank 1010 — MDR (T/hr): 10.5 — STACK ID (DIAM:HEIGHT): 1': 94
(200-04-G) — YEARLY PROD (T/yr): 91,980 — FLOWRATE (ACFM): 1200
CNTRL DEV: Dust Collector (CE200-04-G) — Ts(°F): 140

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-52			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0.43	0.99	4.54	109.03	19.90	0.045	0.199	0.005
PM10	0.43	0.99	4.54	109.03	19.90	0.045	0.199	0.005
PM2.5	0.43	0.99	4.54	109.03	19.90	0.045	0.199	0.005
SOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A
NOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A
VOC	0	0	0.16	3.74	0.68	0.156	0.682	N/A
CO	0	0	0.00	0.00	0.00	0.000	0.000	N/A
HAPs	0	0	0.00	0.00	0.00	0.000	0.000	N/A

EF: back calculated using manufacturer's specifications of 0.005 gr/dscf grain loading
Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
200-04-G	20	1200	5	70	1195	1136	0.16	0.68

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Corn Screenings Silo — MDR (T/hr): 5.5 — STACK ID (DIAM:HEIGHT): 1': 94
(200-06-G) — YEARLY PROD (T/yr): 48180 — FLOWRATE (ACFM): 1200
CNTRL DEV: Dust Collector (CE200-06-G) — Ts(°F): 100

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-52			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0.88	0.99	4.87	116.82	21.32	0.049	0.213	0.005
PM10	0.88	0.99	4.87	116.82	21.32	0.049	0.213	0.005
PM2.5	0.88	0.99	4.87	116.82	21.32	0.049	0.213	0.005
SOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A
NOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A
VOC	0	0	0.00	0.00	0.00	0.000	0.000	N/A
CO	0	0	0.00	0.00	0.00	0.000	0.000	N/A
HAPs	0	0	0.00	0.00	0.00	0.000	0.000	N/A

EF: back calculated using manufacturer's specifications of 0.005 gr/dscf grain loading
Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

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Fiber Drying Equipment — MDR (T/hr): 39.8475 — STACK ID (DIAM:HEIGHT): 7': 104'
(89-01-G) — YEARLY PROD (T/yr): 349064.1 — FLOWRATE (ACFM): 81705
CNTRL DEV: Scrubber (CE89-01-G) — Ts(°F): 176

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-54			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0.48	0.9	19.13	459.04	83.78	1.91	8.38	0.003
PM10	0.29	0.9	11.56	277.34	50.61	1.16	5.06	0.002
PM2.5	0.29	0.9	11.56	277.34	50.61	1.16	5.06	0.002
SOx*	0.112	0.8	4.46	107.11	19.55	0.89	3.91	N/A
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A
VOC*	0.2932	0.5	11.68	280.40	51.17	5.84	25.59	N/A
CO*	0.3727	0	14.85	356.43	65.05	14.85	65.05	N/A
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A

EF: back calculated using manufacturer's specifications of 0.010 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.
*Emission Factors are based on stack test data from the source.

Fiber Dryer (89-01-G)
In-Process Fuel Combustion

MDC (mmBtu/hr): 78 — HEAT CONTENT (Btu/cft): 1020 — STACK ID (DIAM:HEIGHT): 7': 104'
CNTRL DEV: Wet Scrubber (CE89-01-G) — MDR (mmcft/hr): 0.0765 — QTY BURNED (mmcft/yr): 256.70 — FLOWRATE (ACFM): 81705
Ts(°F): 176

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-54			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	1.9	0	0.15	3.49	0.64	0.15	0.64	0.00
PM10	7.6	0	0.58	13.95	2.55	0.58	2.55	0.00
PM2.5	7.6	0	0.58	13.95	2.55	0.58	2.55	0.00
SOx	0.6	0	0.05	1.10	0.20	0.05	0.20	N/A
NOx	100	0	7.65	183.53	33.49	7.65	33.49	N/A
VOC	5.5	0	0.42	10.09	1.84	0.42	1.84	N/A
CO	84	0	6.42	154.16	28.14	6.42	28.14	N/A
Worst Case Single HAP	1.8	0	0.14	3.30	0.60	0.14	0.60	N/A

E.F. based on AP-42 and 40 CFR 98.
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.
Emissions based on company's submittal of 8760 hours/year

Cargill, Inc. SSM 089-36178-00203/Part 70 Renewal 089-36144-00203 Grind and Feedhouse Area

Total: Fiber Dryer (89-01-G)

	POTENTIAL TO EMIT						
	BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	19.27	462.53	84.41		2.06	9.01	0.003
PM10	12.14	291.29	53.16		1.74	7.61	0.002
PM2.5	12.14	291.29	53.16		1.74	7.61	0.002
SOx	4.51	108.21	19.75		0.94	4.11	N/A
NOx	7.65	183.53	33.49		7.65	33.49	N/A
VOC	12.10	290.49	53.01		6.26	27.43	N/A
CO	21.27	510.59	93.18		21.27	93.18	N/A
HAPs	0.14	3.30	0.60		0.14	0.60	N/A

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Germ Drver Cooler (124A-01-G) MDR (T/hr): 8.29 STACK ID (DIAM:HEIGHT): 3'; 101'
YEARLY PROD (T/yr): 72.620 FLOWRATE (ACFM): 13,600
CNTRL DEV: scrubber (CE124A-01-G) Ts(°F): 200

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-54			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	8.90	0.95	73.78	1770.74	323.16		3.69	16.16	0.039
PM10	8.90	0.95	73.78	1770.74	323.16		3.69	16.16	0.039
PM2.5	8.90	0.95	73.78	1770.74	323.16		3.69	16.16	0.039
SOx*	0.204	0.8	1.69	40.59	7.41		0.34	1.48	N/A
NOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
VOC**	0	0.5	8.33	199.92	36.49		4.17	18.24	N/A
CO*	0.0638	0	0.53	12.69	2.32		0.53	2.32	N/A
HAPs**	0	0.5	2.08	49.92	9.11		1.04	4.56	N/A

EF: back calculated using manufacturer's specifications of 0.02 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.
*Emission Factors are based on stack test data from the source.
**VOC and HAP emissions are based on stack test data from May 2007.

Germ Dryer Cooler (124A-01-G)
In-Process Fuel Combustion

MDC (mmBtu/hr): 12.9 HEAT CONTENT (Btu/cft): 1020 STACK ID (DIAM:HEIGHT): 2'; 40'
CNTRL DEV: NONE MDR (mmcft/hr): 0.0126 QTY BURNED (mmcft/yr): 47.30 FLOWRATE (ACFM): 9,000
Ts(°F): 150

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-54			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	1.9	0	0.02	0.58	0.11		0.02	0.11	0.00
PM10	7.6	0	0.10	2.31	0.42		0.10	0.42	0.00
PM2.5	7.6	0	0.10	2.31	0.42		0.10	0.42	0.00
SOx	0.6	0	0.01	0.18	0.03		0.01	0.03	N/A
NOx	100	0	1.26	30.35	5.54		1.26	5.54	N/A
VOC	5.5	0	0.07	1.67	0.30		0.07	0.30	N/A
CO	84	0	1.06	25.50	4.65		1.06	4.65	N/A
HAPs	0	0	0.00	0.00	0.00		0.00	0.00	N/A

E.F. based on AP-42 and 40 CFR 98.
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.
Emissions based on company's submittal of 8760 hours/year

Total: Germ Dryer Cooler (124A-01-G)

	POTENTIAL TO EMIT						
	BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	73.81	1,771.32	323.27		3.71	16.26	0.04
PM10	73.88	1,773.05	323.58		3.79	16.58	0.04
PM2.5	73.88	1,773.05	323.58		3.79	16.58	0.04
SOx	1.70	40.77	7.44		0.35	1.51	N/A
NOx	1.26	30.35	5.54		1.26	5.54	N/A
VOC	8.40	201.59	36.79		4.23	18.55	N/A
CO	1.59	38.19	6.97		1.59	6.97	N/A
HAPs	2.08	49.92	9.11		1.04	4.56	N/A

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Germ Tank 1310 MDR (T/hr): 40 STACK ID (DIAM:HEIGHT): 1'; 94
(200-01-G) YEARLY PROD (T/yr): 350400 FLOWRATE (ACFM): 80
CNTRL DEV: Dust Collector (CE200-01-G) Ts(°F): 140

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-008-06			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.01	0.99	0.30	7.27	1.33		0.003	0.013	0.005
PM10	0.01	0.99	0.30	7.27	1.33		0.003	0.013	0.005
PM2.5	0.01	0.99	0.30	7.27	1.33		0.003	0.013	0.005
SOx	0	0	0.00	0.00	0.00		0.000	0.000	N/A
NOx	0	0	0.00	0.00	0.00		0.000	0.000	N/A
VOC	0	0	0.16	3.74	0.68		0.156	0.682	N/A
CO	0	0	0.00	0.00	0.00		0.000	0.000	N/A
HAPs	0	0	0.00	0.00	0.00		0.000	0.000	N/A

EF: back calculated using manufacturer's specifications of 0.005 gr/dscf grain loading
Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
200-01-G	20	1200	5	70	1195	1136	0.16	0.68

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Gluten Tank 1410 MDR (T/hr): 40 STACK ID (DIAM:HEIGHT): 1'; 94
(200-02-G) YEARLY PROD (T/yr): 350400 FLOWRATE (ACFM): 80
CNTRL DEV: Dust Collector (CE200-02-G) Ts(°F): 140

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-008-06			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.01	0.99	0.30	7.27	1.33		0.003	0.013	0.005
PM10	0.01	0.99	0.30	7.27	1.33		0.003	0.013	0.005
PM2.5	0.01	0.99	0.30	7.27	1.33		0.003	0.013	0.005
SOx	0	0	0.00	0.00	0.00		0.000	0.000	N/A
NOx	0	0	0.00	0.00	0.00		0.000	0.000	N/A
VOC	0	0	0.16	3.74	0.68		0.156	0.682	N/A
CO	0	0	0.00	0.00	0.00		0.000	0.000	N/A
HAPs	0	0	0.00	0.00	0.00		0.000	0.000	N/A

EF: back calculated using manufacturer's specifications of 0.005 gr/dscf grain loading
Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
200-02-G	20	1200	5	70	1195	1136	0.16	0.68

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Cargill, Inc. SSM 089-36178-00203/Part 70 Renewal 089-36144-00203 Grind and Feedhouse Area

Bulk Loadout — MDR (T/hr): 47.95 — STACK ID (DIAM:HEIGHT): 3': 100
(200-05-G) — YEARLY PROD (T/yr): 420042 — FLOWRATE (ACFM): 30000
CNTRL DEV: Dust Collector (CE200-05-G) — Ts(°F): 100

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-55			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	2.54	0.99	121.68	2,920.41	532.97	1.22	5.33	0.005
PM10	2.54	0.99	121.68	2,920.41	532.97	1.22	5.33	0.005
PM2.5	2.54	0.99	121.68	2,920.41	532.97	1.22	5.33	0.005
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A
VOC	0	0	3.89	93.45	17.05	3.89	17.05	N/A
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A

EF: back calculated usinq manufacturer's specifications of 0.005 gr/dscf grain loading
Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	ton/yr
200-05-G	20	30000	5	70	29887	28392	3.89	17.05

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hrs) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Central Vacuum Loadout — MDR (T/hr): 0.05 — STACK ID (DIAM:HEIGHT): 1': 15
(200-07-G) — YEARLY PROD (T/yr): 438 — FLOWRATE (ACFM): 400
CNTRL DEV: Dust Collector (CE200-07-G) — Ts(°F): 100

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-55			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	32.45	0.99	1.62	38.94	7.11	0.016	0.071	0.005
PM10	32.45	0.99	1.62	38.94	7.11	0.016	0.071	0.005
PM2.5	32.45	0.99	1.62	38.94	7.11	0.016	0.071	0.005
SOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A
NOx	0	0	0.00	0.00	0.00	0.000	0.000	N/A
VOC	0	0	0.00	0.00	0.00	0.000	0.000	N/A
CO	0	0	0.00	0.00	0.00	0.000	0.000	N/A
HAPs	0	0	0.00	0.00	0.00	0.000	0.000	N/A

EF: back calculated usinq manufacturer's specifications of 0.005 gr/dscf grain loading
Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

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Corn Receiver Storage Bins #1 and #2 — MDR (T/hr): 840 — STACK ID (DIAM:HEIGHT): 1', 30'
(140-01-G & 140-02-G) (cement silos) — YEARLY PROD (T/yr): 7,358,400 — FLOWRATE (ACFM): 2000
CNTRL DEV: Bin Vent — Ts(°F): 70

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-55			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0.04	0.99	34.29	822.86	150.17	0.34	1.50	0.02
PM10	0.04	0.99	34.29	822.86	150.17	0.34	1.50	0.02
PM2.5	0.04	0.99	34.29	822.86	150.17	0.34	1.50	0.02
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A

EF: back calculated usinq manufacturer's specifications of 0.020 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

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Corn Receiving and Storage Bins #3 and #4 — MDR (T/hr): 840 — STACK ID (DIAM:HEIGHT): 1', 30'
(140-03-G & 140-04-G) (metal silos) — YEARLY PROD (T/yr): 7,358,400 — FLOWRATE (ACFM): 2000
CNTRL DEV: Bin Vent — Ts(°F): 70

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-55			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0.04	0.99	34.29	822.86	150.17	0.34	1.50	0.02
PM10	0.04	0.99	34.29	822.86	150.17	0.34	1.50	0.02
PM2.5	0.04	0.99	34.29	822.86	150.17	0.34	1.50	0.02
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A

EF: back calculated usinq manufacturer's specifications of 0.020 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

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Corn Receiving and Storage Bin #5 — MDR (T/hr): 420 — STACK ID (DIAM:HEIGHT): 1', 100'
(33-01-G) (Day Tank) — YEARLY PROD (T/yr): 3,679,200 — FLOWRATE (ACFM): 1000
CNTRL DEV: Bin Vent — Ts(°F): 70

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-55			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0.04	0.99	17.14	411.43	75.09	0.17	0.75	0.02
PM10	0.04	0.99	17.14	411.43	75.09	0.17	0.75	0.02
PM2.5	0.04	0.99	17.14	411.43	75.09	0.17	0.75	0.02
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A

EF: back calculated usinq manufacturer's specifications of 0.020 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

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Corn Receiving and Storage Bin #6 — MDR (T/hr): 420 — STACK ID (DIAM:HEIGHT): 1', 100'
(33-02-G)(Day Tank) — YEARLY PROD (T/yr): 3,679,200 — FLOWRATE (ACFM): 1000
CNTRL DEV: Bin Vent — Ts(°F): 100

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-55			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0.04	0.99	16.22	389.39	71.06	0.16	0.71	0.02
PM10	0.04	0.99	16.22	389.39	71.06	0.16	0.71	0.02
PM2.5	0.04	0.99	16.22	389.39	71.06	0.16	0.71	0.02
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A
VOC	0	0	0.00	0.00	0.00	0.00	0.00	N/A
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A

EF: back calculated usinq manufacturer's specifications of 0.020 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

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Cargill, Inc. SSM 089-36178-00203/Part 70 Renewal 089-36144-00203 Grind and Feedhouse Area

Corn Dump Pit — MDR (T/hr): 840 — STACK ID (DIAM:HEIGHT): (3.4': 70')
(140-05-G) — YEARLY PROD (T/yr): 7,358,400 — FLOWRATE (ACFM): 30000
CNTRL DEV: Torit & Day Baghouse — Ts(°F): 70
(BH-1) (CE140-05-G)

PERMITTED OPERATING HRS: 8,760 hr/yr

SCC NO. 3-02-007-51			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	1.53	0.999	1,285.71	30,857.14	5,631.43		1.29	5.63	0.005
PM10	1.53	0.999	1,285.71	30,857.14	5,631.43		1.29	5.63	0.005
PM2.5	1.53	0.999	1,285.71	30,857.14	5,631.43		1.29	5.63	0.005
SOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
NOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
VOC	0	0	0.00	0.00	0.00		0.00	0.00	N/A
CO	0	0	0.00	0.00	0.00		0.00	0.00	N/A
HAPs	0	0	0.00	0.00	0.00		0.00	0.00	N/A

Torit Donaldson guarantee to Cargill based on 1500 lb/hr load - 99.9% control efficiency = 0.005 gr/dscf (application).
Actual emissions based on 0.005 gr/dscf for 8760 hours; accepted by Cargill as actual emissions and limitation (application).
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

****

Gravity Take-Up Conveyor (Corn Scale System) — MDR (T/hr): 140 — STACK ID (DIAM:HEIGHT): 1':16'
(140-06-G) — YEARLY PROD (T/yr): 1226400 — FLOWRATE (ACFM): 1800
CNTRL DEV: Baghouse (CE140-06-G) — Ts(°F): 70

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-55			POTENTIAL EMISSIONS						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.11	0.99	15.43	370.29	67.58		0.15	0.68	0.01
PM10	0.11	0.99	15.43	370.29	67.58		0.15	0.68	0.01
PM2.5	0.11	0.99	15.43	370.29	67.58		0.15	0.68	0.010
SOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
NOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
VOC	0	0	0.00	0.00	0.00		0.00	0.00	N/A
CO	0	0	0.00	0.00	0.00		0.00	0.00	N/A
HAPs	0	0	0.00	0.00	0.00		0.00	0.00	N/A

EF: back calculated usino manufacturer's specifications of 0.010 or/dscf orain loadino
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

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Corn Elevator Conveying — MDR (T/hr): 140 — STACK ID (DIAM:HEIGHT): 1':16'
(140-07-G) — YEARLY PROD (T/yr): 1,226,400 — FLOWRATE (ACFM): 1000
CNTRL DEV: Baghouse (CE140-07-G) — Ts(°F): 70

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-52			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.06	0.99	8.57	205.71	37.54		0.09	0.38	0.01
PM10	0.06	0.99	8.57	205.71	37.54		0.09	0.38	0.01
PM2.5	0.06	0.99	8.57	205.71	37.54		0.09	0.38	0.010
SOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
NOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
VOC	0	0	0.00	0.00	0.00		0.00	0.00	N/A
CO	0	0	0.00	0.00	0.00		0.00	0.00	N/A
HAPs	0	0	0.00	0.00	0.00		0.00	0.00	N/A

EF: back calculated usino manufacturer's specifications of 0.01 or/dscf orain loadino
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

****

Corn Cleaner — MDR (T/hr): 140 — STACK ID (DIAM:HEIGHT): 1':16'
(33-03-G) — YEARLY PROD (T/yr): 1,226,400 — FLOWRATE (ACFM): 2200
CNTRL DEV: Baghouse (CE33-03-G) — Ts(°F): 70

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-55			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.13	0.99	18.86	452.57	82.59		0.19	0.83	0.01
PM10	0.13	0.99	18.86	452.57	82.59		0.19	0.83	0.01
PM2.5	0.13	0.99	18.86	452.57	82.59		0.19	0.83	0.01
SOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
NOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
VOC	0	0	0.00	0.00	0.00		0.00	0.00	N/A
CO	0	0	0.00	0.00	0.00		0.00	0.00	N/A
HAPs	0	0	0.00	0.00	0.00		0.00	0.00	N/A

EF: back calculated usino manufacturer's specifications of 0.01 or/dscf orain loadino
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

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Unit ID Gluten Filter
CNTRL DEV: None

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-55			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.00	0	0.00	0.00	0.00		0.00	0.00	0.00
PM10	0.00	0	0.00	0.00	0.00		0.00	0.00	0.00
PM2.5	0.00	0	0.00	0.00	0.00		0.00	0.00	0.00
SOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
NOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
VOC	0	0	0.42	10.08	1.84		0.42	1.84	N/A
CO	0	0	0.00	0.00	0.00		0.00	0.00	N/A
HAPs	0	0	0.02	0.50	0.09		0.02	0.09	N/A

*VOC and HAP emissions are based on stack test data from April 2003.

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Unit ID Gluten Vacuum Pumps — MDR (T/hr): 104.17
CNTRL DEV: None — YEARLY PROD (T/yr): 912,500

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-55			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.00	0	0.00	0.00	0.00		0.00	0.00	0.00
PM10	0.00	0	0.00	0.00	0.00		0.00	0.00	0.00
PM2.5	0.00	0	0.00	0.00	0.00		0.00	0.00	0.00
SOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
NOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
VOC	0.0047	0	0.49	11.75	2.14		0.49	2.14	N/A
CO	0	0	0.00	0.00	0.00		0.00	0.00	N/A
HAPs	0.0047	0	0.49	11.75	2.14		0.49	2.14	N/A

EF: based on 0.000132 lb VOC/bu factor from an engineering test performed at plant in Cedar Rapids, Iowa.

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Total: Stack Emissions - Grind and Feedhouse Area

	POTENTIAL TO EMIT					
	BEFORE CONTROLS				AFTER CONTROLS	
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)
PM	1,697.03	40,728.61	7,432.97		12.02	52.64
PM10	1,690.03	40,560.78	7,402.34		11.77	51.57
PM2.5	1,690.03	40,560.78	7,402.34		11.77	51.57
SOx	11.03	264.62	48.29		2.25	9.85
NOx	10.14	243.29	44.40		10.14	44.40
VOC	32.51	780.17	142.38		19.21	84.15
CO	26.84	644.15	117.56		26.84	117.56
HAPs	4.38	105.13	19.19		2.51	11.01

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Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Utility Area

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Natural Gas Fired Package Boiler #1
(89-03-U)
CNTRL DEV: NONE
Installed: 2006

MDC (mmBtu/hr): 274
MDR (mmcft/hr): 0.2686

HEAT CONTENT (Btu/cft): 1,020
QTY BURNED (mmcft/yr): 2353.1765

STACK ID (DIAM:HEIGHT): (4.6':89')
FLOWRATE (ACFM): 69,137
Ts(°F): 286

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 1-02-006-01			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	1.9	0	0.5104	12.2494	2.2355	0.5104	2.2355	0.0012
PM10	7.6	0	2.0416	48.9976	8.9421	2.0416	8.9421	0.0048
PM2.5	7.6	0	2.0416	48.9976	8.9421	2.0416	8.9421	0.0048
SOx	0.6	0	0.1612	3.8682	0.7060	0.1612	0.7060	N/A
NOx	190	0	51.0392	1,224.9412	223.5518	51.0392	223.5518	N/A
VOC	5.5	0	1.4775	35.4588	6.4712	1.4775	6.4712	N/A
CO	84	0	22.5647	541.5529	98.8334	22.5647	98.8334	N/A
LEAD	0.00005	0	0.0000	0.0003	0.0001	0.0000	0.0001	N/A

E.F. based on AP-42 Chapter 1.4 and 40 CFR 98.
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

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Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Refinery Area

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P4;S3: #4 Corn Syrup Spray Dryer
(100-03-R)
CNTRL DEV: Wet scrubber (CE 100-03-R)

MDR (T/hr): 4.8
YEARLY PROD (T/yr): 42048

STACK ID (DIAM:HEIGHT): 8';90'
FLOWRATE (ACFM): 50000
Ts(°F): 110

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-54			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	83.02	0.99	398.50	9,563.9	1,745.41		3.985	17.454	0.010
PM10	83.02	0.99	398.50	9,563.9	1,745.41		3.985	17.454	0.010
PM2.5	83.02	0.99	398.50	9,563.9	1,745.41		3.985	17.454	0.010
SOx	0	0	0.0000	0.0000	0.00		0.0000	0.00	N/A
NOx	0	0	0.0000	0.0000	0.00		0.0000	0.00	N/A
VOC*	N/A	0.5	4.0400	96.9600	17.70		2.0200	8.85	N/A
CO*	N/A	0	0.7300	17.5200	3.20		0.7300	3.20	N/A
HAPs*	N/A	0.5	1.0100	24.2400	4.42		0.5050	2.21	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

*VOC, CO and HAP emissions are based on stack test data from May 2007.

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Corn Syrup Spray Dryer/Cooler System #3
(100-01-R)
CNTRL DEV: Wet Venturi Scrubber (CE 100-01-R)

MDR (T/hr): 4.8
YEARLY PROD (T/yr):

STACK ID (DIAM:HEIGHT): 8.6';100'
FLOWRATE (ACFM): 42187
Ts(°F): 120

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-54			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	68.84	0.99	330.43	7,930.3	1,447.28		3.304	14.473	0.010
PM10	68.84	0.99	330.43	7,930.3	1,447.28		3.304	14.473	0.010
PM2.5	68.84	0.99	330.43	7,930.3	1,447.28		3.304	14.473	0.010
SOx	0	0	0.0000	0.0000	0.00		0.00	0.00	N/A
NOx	0	0	0.0000	0.0000	0.00		0.00	0.00	N/A
VOC*	N/A	0.5	10.7800	258.7200	47.22		5.39	23.61	N/A
CO*	N/A	0	0.9300	22.3200	4.07		0.93	4.07	N/A
HAPs*	N/A	0.5	2.6950	64.6800	11.80		1.35	5.90	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

*VOC, CO and HAP emissions are based on stack test data from May 2007.

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Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Refinery Area

P4;S5: Activated Carbon Regeneration Furnace #2 — MDR (T/hr): 1.146 — STACK ID (DIAM:HEIGHT): 2';110'

(104-01-R) — YEARLY PROD (T/yr): 10038.96 — FLOWRATE (ACFM): 6622

CNTRL DEV: Scrubber (CE104-01-R) — Ts(°F): 160

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-54			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	31.75	0.98	36.390	873.372	159.390	0.728	3.188	0.015
PM10	31.75	0.98	36.390	873.372	159.390	0.728	3.188	0.015
PM2.5	31.75	0.98	36.390	873.372	159.390	0.728	3.188	0.015
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

EF: back calculated using manufacturer's specifications of 0.015 gr/dscf grain loading
Actual Emissions based on 0.015 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

P4;S5A: Activated Carbon Regeneration Furnace #2

In-Process Fuel Combustion

(104-01-R) — MDC (mmBtu/hr): 13.2 — HEAT CONTENT (Btu/cft): 1020 — STACK ID (DIAM:HEIGHT): 2';110'

CNTRL DEV: NONE — MDR (mmcft/hr): 0.0129 — QTY BURNED (mmcft/yr): 43.40 — FLOWRATE (ACFM): 6622

Ts(°F): 160

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-54			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	1.9	0	0.0246	0.5901	0.1077	0.0246	0.1077	0.0005
PM10	7.6	0	0.0984	2.3605	0.4308	0.0984	0.4308	0.0020
PM2.5	7.6	0	0.0984	2.3605	0.4308	0.0984	0.4308	0.0020
SOx	0.6	0	0.0078	0.1864	0.0340	0.0078	0.0340	N/A
NOx	100	0	1.2941	31.0588	5.6682	1.2941	5.6682	N/A
VOC	5.5	0	0.0712	1.7082	0.3118	0.0712	0.3118	N/A
CO	84	0	1.0871	26.0894	4.7613	1.0871	4.7613	N/A
Hexane	1.8	0	0.0233	0.5591	0.1020	0.0233	0.1020	N/A

E.F. based on AP-42 Chapter 1.4 and 40 CFR 98.
Emissions based on company's submittal of 8760 hours/year
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

Total: P4;S5: Activated Carbon Regeneration Furnace #2

	POTENTIAL TO EMIT					
	BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	36.4151	873.9617	159.4980	0.7524	3.2955	0.0155
PM10	36.4888	875.7321	159.8211	0.8262	3.6186	0.0170
PM2.5	36.4888	875.7321	159.8211	0.8262	3.6186	0.0170
SOx	0.0078	0.1864	0.0340	0.0078	0.0340	N/A
NOx	1.2941	31.0588	5.6682	1.2941	5.6682	N/A
VOC	0.0712	1.7082	0.3118	0.0712	0.3118	N/A
CO	1.0871	26.0894	4.7613	1.0871	4.7613	N/A
HAPs	0.0233	0.5591	0.1020	0.0233	0.1020	N/A

****

P4; S6: Liquid Soda Ash Tank — MDR (T/hr): 15 — STACK ID (DIAM:HEIGHT): 1';70'

(104-02-R) — YEARLY PROD (T/yr): 1650 — FLOWRATE (ACFM): 1000

CNTRL DEV: Venturi Scrubber (CE-104-02-R) — Ts(°F): 130

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO.			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	1.03	0.99	15.400	369.588	67.450	0.154	0.674	0.020
PM10	1.03	0.99	15.400	369.588	67.450	0.154	0.674	0.020
PM2.5	1.03	0.99	15.400	369.588	67.450	0.154	0.674	0.020
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
VOC	0	0	0.000	0.000	0.000	0.000	0.000	N/A
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A

EF: back calculated using manufacturer's specifications of 0.02 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

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Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Refinery Area

P4;S8: Filter Aid Hopper — MDR (T/hr): 0.75 — STACK ID (DIAM:HEIGHT): 1';40'

(104-03-R) — YEARLY PROD (T/yr): 6570 — FLOWRATE (ACFM): 250

CNTRL DEV: Dust Collector (CE 104-03-R) — Ts(°F): 60

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-999-99			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	5.82	0.99	4.368	104.835	19.132		0.044	0.191	0.020
PM10	5.82	0.99	4.368	104.835	19.132		0.044	0.191	0.020
PM2.5	5.82	0.99	4.368	104.835	19.132		0.044	0.191	0.020
SOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
VOC	0	0	0.000	0.000	0.000		0.000	0.000	N/A
CO	0	0	0.000	0.000	0.000		0.000	0.000	N/A
HAPs	0	0	0.000	0.000	0.000		0.000	0.000	N/A

EF: back calculated using manufacturer's specifications of 0.02 gr/dscf grain loading

Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)

No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

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P4;S9: Sodium Bisulfate Bag Dump — MDR (T/hr): 0.7 — STACK ID (DIAM:HEIGHT): 1';40'

(104-05-R) — YEARLY PROD (T/yr): 6132 — FLOWRATE (ACFM): 460

CNTRL DEV: Dust Collector (CE-104-05-R) — Ts(°F): 60

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO.			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	11.48	0.99	8.0374	192.8967	35.2036		0.0804	0.3520	0.0200
PM10	11.48	0.99	8.0374	192.8967	35.2036		0.0804	0.3520	0.0200
PM2.5	11.48	0.99	8.0374	192.8967	35.2036		0.0804	0.3520	0.0200
SOx	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
NOx	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
VOC	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
CO	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
HAPs	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A

EF: back calculated using manufacturer's specifications of 0.02 gr/dscf grain loading

Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)

No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

****

Unit ID RVF 1-1

CNTRL DEV: None

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit lb/day	Potential to Emit ton/yr
RVF 1-1	20	1250	5	70	1245	1183	0.16	3.89	0.71

Methodology

SCFM = ACFM * (528 / (460 - Temperature F))

DSCFM = ACFM * (1 - Moisture %)

VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))

VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

****

Unit ID RVF 1-2

CNTRL DEV: None

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit lb/day	Potential to Emit ton/yr
RVF 1-2	20	1250	5	70	1245	1183	0.16	3.89	0.71

Methodology

SCFM = ACFM * (528 / (460 - Temperature F))

DSCFM = ACFM * (1 - Moisture %)

VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))

VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

****

Unit ID Precoating Vacuum Pump

CNTRL DEV: None

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit lb/day	Potential to Emit ton/yr
Precoating Vacuum Pump	20	1250	5	70	1245	1183	0.16	3.89	0.71

Methodology

SCFM = ACFM * (528 / (460 - Temperature F))

DSCFM = ACFM * (1 - Moisture %)

VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))

VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

****

Unit ID RVF 2-1

CNTRL DEV: None

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit lb/day	Potential to Emit ton/yr
RVF 2-1	20	1250	5	70	1245	1183	0.16	3.89	0.71

Methodology

SCFM = ACFM * (528 / (460 - Temperature F))

DSCFM = ACFM * (1 - Moisture %)

VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))

VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Refinery Area
Unit ID RVF 2-2
CNTRL DEV: None

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit lb/day	Potential to Emit ton/yr
RVF 2-2	20	1250	5	70	1245	1183	0.16	3.89	0.71

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

****

Unit ID RVF 3-1
CNTRL DEV: None

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit lb/day	Potential to Emit ton/yr
RVF 3-1	20	900	5	70	897	852	0.12	0.12	0.51

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

****

Unit ID RVF 3-2
CNTRL DEV: None

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit lb/day	Potential to Emit ton/yr
RVF 3-2	20	900	5	70	897	852	0.12	2.80	0.51

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

****

Unit ID RVF 3-2 Precoating Vacuum Pump
CNTRL DEV: None

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit lb/day	Potential to Emit ton/yr
RVF 3-2 Precoating Pump	20	900	5	70	897	852	0.12	2.80	0.51

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

****

Unit ID HCL Tank
CNTRL DEV: None

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit lb/day	Potential to Emit ton/yr
RVF 3-2 Precoating Pump	10	100	5	70	100	95	0.01	0.16	0.03

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

****

Unit ID 15-06-R
Building 15 HCl Emissions (Indoor)
CNTRL DEV: None
Vent through general building ventilation
(Fugitive Emissions)
SCC NO. 03-02-007-52

MDR (T/hr): 0.0003
YEARLY PURCHASE (T/yr): 7.277
(All Toluene Emissions)

STACK ID (DIAM:HEIGHT): N/A
FLOWRATE (ACFM): N/A
Ts(°F): N/A

PERMITTED OPERATING HRS: 8760 hr/yr

			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
PM10	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
PM2.5	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
SOx	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
NOx	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
VOC	2000	0	0.6000	14.4000	2.6280		0.6000	2.6280	N/A
CO	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
HAP	2000	0	0.6000	14.4000	2.6280		0.6000	2.6280	N/A

Emissions based on SOCMI factors
HAP: Hydrogen chloride

****

Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Refinery Area
Unit ID 15-07-F — MDR (T/hr): 0.00015 — STACK ID (DIAM:HEIGHT): N/A
Building 15 HCl Emissions (Outdoor) — YEARLY PURCHASE (T/yr): 0.000 — FLOWRATE (ACFM): N/A
CNTRL DEV: None — Ts(°F): N/A

PERMITTED OPERATING HRS: 8760 hr/yr

(Fugitive Emissions)
SCC NO. 03-02-007-52

			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
PM10	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
PM2.5	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
SOx	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
NOx	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
VOC	2000	0	0.3000	7.2000	1.3140		0.3000	1.3140	N/A
CO	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
HAP	2000	0	0.3000	7.2000	1.3140		0.3000	1.3140	N/A

Emissions based on SOCMI factors
HAP: Hydrogen chloride

Total: Stack Emissions - Refinery Area

	POTENTIAL TO EMIT						
	BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	793.147	19,035.516	3,473.98		9.048	36.44	0.096
PM10	793.220	19,037.287	3,474.30		9.121	36.76	0.097
PM2.5	793.220	19,037.287	3,474.30		9.121	36.76	0.097
SOx	0.008	0.186	0.03		0.008	0.03	N/A
NOx	1.294	31.059	5.67		1.294	5.67	N/A
VOC	16.959	404.336	69.17		9.549	41.83	N/A
CO	2.747	65.929	12.03		2.747	12.03	N/A
HAPs	4.628	111.079	20.27		2.776	12.16	N/A

Total: Fugitive Emissions - Refinery Area

	POTENTIAL TO EMIT						
	BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.000	0.000	0		0.000	0	N/A
PM10	0.000	0.000	0		0.000	0	N/A
PM2.5	0.000	0.000	0		0.000	0	N/A
SOx	0.000	0.000	0		0.000	0	N/A
NOx	0.000	0.000	0		0.000	0	N/A
VOC	0.900	21.600	4		0.900	3.9	N/A
CO	0.000	0.000	0		0.000	0	N/A
HAPs	0.900	21.600	4		0.900	3.9	N/A

HAPs: HCl

Total: Emissions - Refinery Area

	POTENTIAL TO EMIT						
	BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	793.147	19,035.516	3,473.98		9.048	36.44	0.096
PM10	793.220	19,037.287	3,474.30		9.121	36.76	0.097
PM2.5	793.220	19,037.287	3,474.30		9.121	36.76	0.097
SOx	0.008	0.186	0.03		0.008	0.03	N/A
NOx	1.294	31.059	5.67		1.294	5.67	N/A
VOC	17.859	425.936	73.11		10.449	45.77	N/A
CO	2.747	65.929	12.03		2.747	12.03	N/A
HAPs	5.528	132.679	24.21		3.676	16.10	N/A

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Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Starch Production Area

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P5;S5: Batch Scale Hopper #1 — MDR (T/hr): 24 — STACK ID (DIAM:HEIGHT): 1';70'
(34-01-S) — YEARLY PROD (T/yr): 210240 — FLOWRATE (ACFM): 550
CNTRL DEV: Dust Collector (CE34-01-S) — Ts(°F): 100

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-014-01			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0.19	0.99	4.46	107.08	19.54	0.04	0.20	0.0100
PM10	0.19	0.99	4.46	107.08	19.54	0.04	0.20	0.0100
PM2.5	0.19	0.99	4.46	107.08	19.54	0.04	0.20	0.0100
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A
VOC	0	0	0.07	1.62	0.30	0.07	0.30	N/A
CO	0	0	0.00	0.00	0.00	0.00	0.00	N/A
HAPs	0	0	0.00	0.00	0.00	0.00	0.00	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
34-01-S	20	550	5	100	519	493	0.07	0.30

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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P5;S6: Dextrin Starch Reactor #1 — MDR (T/hr): 6 — STACK ID (DIAM:HEIGHT): 1';40'
(34-02-S) — YEARLY PROD (T/yr): 52560 — FLOWRATE (ACFM): 2600
CNTRL DEV: Dust Collector (CE34-02-S) — Ts(°F): 200

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO.			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	2.98	0.99	17.896	429.506	78.385	0.179	0.784	0.010
PM10	2.98	0.99	17.896	429.506	78.385	0.179	0.784	0.010
PM2.5	2.98	0.99	17.896	429.506	78.385	0.179	0.784	0.010
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
VOC	0	0	0.068	1.626	0.297	0.068	0.297	N/A
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
34-02-S	5	2600	5	200	2080	1976	0.07	0.30

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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P5;S7: Dextrin Starch Cooler #1 — MDR (T/hr): 6 — STACK ID (DIAM:HEIGHT): 1';25'
(34-03-S) — YEARLY PROD (T/yr): 52560 — FLOWRATE (ACFM): 550
CNTRL DEV: Dust Collector (CE34-03-S) — Ts(°F): 130

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03--01-014-01			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0.71	0.99	4.235	101.637	18.549	0.042	0.185	0.010
PM10	0.71	0.99	4.235	101.637	18.549	0.042	0.185	0.010
PM2.5	0.71	0.99	4.235	101.637	18.549	0.042	0.185	0.010
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
VOC	0	0	0.016	0.385	0.070	0.016	0.070	N/A
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
34-03-S	5	550	5	130	492	468	0.02	0.07

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Starch Production Area

P5;S8: Surge Hopper #1 — MDR (T/hr): 6 — STACK ID (DIAM:HEIGHT): 1';85'
(34-05-S) — YEARLY PROD (T/yr): 52560 — FLOWRATE (ACFM): 1400
CNTRL DEV: Dust Collector (CE34-05-S) — Ts(°F): 100

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-014-01			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	1.89	0.99	11.357	272.571	49.744	0.114	0.497	0.010
PM10	1.89	0.99	11.357	272.571	49.744	0.114	0.497	0.010
PM2.5	1.89	0.99	11.357	272.571	49.744	0.114	0.497	0.010
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
VOC	0	0	0.043	1.032	0.188	0.043	0.188	N/A
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
34-05-S	5	1400	5	100	1320	1254	0.04	0.19

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

P5;S10: Batch Scale Hopper #2 — MDR (T/hr): 24 — STACK ID (DIAM:HEIGHT): 1';70'
(34B-13-S) — YEARLY PROD (T/yr): 210240 — FLOWRATE (ACFM): 900
CNTRL DEV: Dust Collector (CE34B-04-S) — Ts(°F): 150

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-014-01			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.28	0.99	6.703	160.862	29.357		0.067	0.294	0.010
PM10	0.28	0.99	6.703	160.862	29.357		0.067	0.294	0.010
PM2.5	0.28	0.99	6.703	160.862	29.357		0.067	0.294	0.010
SOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
VOC	0	0	0.025	0.609	0.111		0.025	0.111	N/A
CO	0	0	0.000	0.000	0.000		0.000	0.000	N/A
HAPs	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	ton/yr
34B-13-S	5	900	5	150	779	740	0.03	0.11

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Starch Production Area

P5;S11: Dextrin Starch Cooler #2 — MDR (T/hr): 6 — STACK ID (DIAM:HEIGHT): 1';25'
(34B-01-S) — YEARLY PROD (T/yr): 52560 — FLOWRATE (ACFM): 550
CNTRL DEV: Dust Collector (CE34B-01-S) — Ts(°F): 140

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-014-01			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.69	0.99	4.164	99.943	18.240		0.042	0.182	0.010
PM10	0.69	0.99	4.164	99.943	18.240		0.042	0.182	0.010
PM2.5	0.69	0.99	4.164	99.943	18.240		0.042	0.182	0.010
SOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
VOC	0	0	0.016	0.378	0.069		0.016	0.069	N/A
CO	0	0	0.000	0.000	0.000		0.000	0.000	N/A
HAPs	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	ton/yr
34B-01-S	5	550	5	140	484	460	0.02	0.07

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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P5;S12: Surge Hopper #2 — MDR (T/hr): 6 — STACK ID (DIAM:HEIGHT): 1';40'
(34B-03-S) — YEARLY PROD (T/yr): 52560 — FLOWRATE (ACFM): 1400
CNTRL DEV: Bag Filter (CE34B-03-S) — Ts(°F): 100

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-014-01			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	1.89	0.99	11.3571	272.5714	49.7443		0.1136	0.4974	0.0100
PM10	1.89	0.99	11.3571	272.5714	49.7443		0.1136	0.4974	0.0100
PM2.5	1.89	0.99	11.3571	272.5714	49.7443		0.1136	0.4974	0.0100
SOx	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
NOx	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
VOC	0	0	0.0430	1.0318	0.1883		0.0430	0.1883	N/A
CO	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
HAPs	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	ton/yr
34B-03-S	5	1400	5	100	1320	1254	0.04	0.19

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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P5;S13: Dextrin Starch Reactor #2 — MDR (T/hr): 6 — STACK ID (DIAM:HEIGHT): 1';40'
(34B-04-S) — YEARLY PROD (T/yr): 52560 — FLOWRATE (ACFM): 2600
CNTRL DEV: Dust Collector (CE34B-04-S) — Ts(°F): 200

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-014-01			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	2.98	0.99	17.896	429.506	78.385		0.179	0.784	0.010
PM10	2.98	0.99	17.896	429.506	78.385		0.179	0.784	0.010
PM2.5	2.98	0.99	17.896	429.506	78.385		0.179	0.784	0.010
SOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
VOC	0	0	0.068	1.626	0.297		0.068	0.297	N/A
CO	0	0	0.000	0.000	0.000		0.000	0.000	N/A
HAPs	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	ton/yr
34B-04-S	5	2600	5	200	2080	1976	0.07	0.30

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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P5;S14: Dextrin Feed Hoppers: 3 and 4 (System2) MDR (T/hr): 12 STACK ID (DIAM:HEIGHT): 1';8'
(34B-05-S and 34B-06-S) YEARLY PROD (T/yr): 105120 FLOWRATE (ACFM): 440
CNTRL DEV: Dust Collector (CE34B-05-S & CE34B-06-S) Ts(°F): 200

PERMITTED OPERATING HRS: 8760 hr/yr

			POTENTIAL TO EMIT						
SCC NO. 3-02-014-01			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.25	0.99	3.029	72.686	13.265		0.030	0.133	0.010
PM10	0.25	0.99	3.029	72.686	13.265		0.030	0.133	0.010
PM2.5	0.25	0.99	3.029	72.686	13.265		0.030	0.133	0.010
SOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
VOC	0	0	0.011	0.275	0.050		0.011	0.050	N/A
CO	0	0	0.000	0.000	0.000		0.000	0.000	N/A
HAPs	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	ton/yr
34B-05-S	5	220	5	200	176	167	0.01	0.03
34B-06-S	5	220	5	200	176	167	0.01	0.03

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Starch Production Area

P5;S15: Dextrin Bulk Loading — MDR (T/hr): 30 — STACK ID (DIAM:HEIGHT): 1';28'

(48-09-S) — YEARLY PROD (T/yr): 262800 — FLOWRATE (ACFM): 3000

CNTRL DEV: Dust Collector (CE48-09-S) — Ts(°F): 70

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-014-01			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.86	0.99	25.714	617.143	112.629		0.257	1.126	0.010
PM10	0.86	0.99	25.714	617.143	112.629		0.257	1.126	0.010
PM2.5	0.86	0.99	25.714	617.143	112.629		0.257	1.126	0.010
SOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
VOC	0	0	0.097	2.336	0.426		0.097	0.426	N/A
CO	0	0	0.000	0.000	0.000		0.000	0.000	N/A
HAPs	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading

Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)

No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
48-09-S	5	3000	5	70	2989	2839	0.10	0.43

Methodology

SCFM = ACFM * (528 / (460 - Temperature F))

DSCFM = ACFM * (1 - Moisture %)

VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))

VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Starch Production Area

P5;S21: Starch Ring Dryer #2 — MDR (T/hr): 13.5 — STACK ID (DIAM:HEIGHT): 6';60'

(59-03-S) — YEARLY PROD (T/yr): 117980 — FLOWRATE (ACFM): 78707

CNTRL DEV: Wet Scrubber (CE59-03-S) — Ts(°F): 104

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-54			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	26	0.99	350.17	8,404.03	1,533.74		3.50	15.34	0.006
PM10	26	0.99	350.17	8,404.03	1,533.74		3.50	15.34	0.006
PM2.5	26	0.99	350.17	8,404.03	1,533.74		3.50	15.34	0.006
SOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
NOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
VOC	0	0.5	28.61	686.64	125.31		14.31	62.66	N/A
CO	0	0	25.78	618.72	112.92		25.78	112.92	N/A
HAPs	0	0.5	7.15	171.67	31.33		3.58	15.67	N/A

EF: back calculated using manufacturer's specifications of 0.006 gr/dscf grain loading
Actual Emissions based on 0.006 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

*VOC, CO and HAP emissions are based on stack test data from May 2007.

P5;S21A: Starch Ring Dryer#2 (59-03-S)

In-Process Fuel Combustion

MDC (mmBtu/hr): 25 — HEAT CONTENT (Btu/cft): 1020 — STACK ID (DIAM:HEIGHT): 6';60'

CNTRL DEV: NONE — MDR (mmcft/hr): 0.0245 — QTY BURNED (mmcft/yr): 99.00 — FLOWRATE (ACFM): 78707

Ts(°F): 104

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-54			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	1.9	0	0.05	1.12	0.20		0.05	0.20	0.0001
PM10	7.6	0	0.19	4.47	0.82		0.19	0.82	0.0003
PM2.5	7.6	0	0.19	4.47	0.82		0.19	0.82	0.0003
SOx	0.6	0	0.01	0.35	0.06		0.01	0.06	N/A
NOx	100	0	2.45	58.82	10.74		2.45	10.74	N/A
VOC	5.5	0	0.13	3.24	0.59		0.13	0.59	N/A
CO	84	0	2.06	49.41	9.02		2.06	9.02	N/A
Hexane	1.8	0	0.04	1.06	0.19		0.04	0.19	N/A

E.F. based on AP-42 Chapter 1.4 and 40 CFR 98.
Emissions based on company's submittal of 8760 hours/year
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

Total: Starch Ring Dryer #2 (59-03-S)

	POTENTIAL TO EMIT						
	BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	350.21	8,405.15	1,533.94		3.55	15.54	0.0056
PM10	350.35	8,408.50	1,534.55		3.69	16.15	0.0058
PM2.5	350.35	8,408.50	1,534.55		3.69	16.15	0.0058
SOx	0.01	0.35	0.06		0.01	0.06	N/A
NOx	2.45	58.82	10.74		2.45	10.74	N/A
VOC	28.74	689.88	125.90		14.44	63.25	N/A
CO	27.84	668.13	121.93		27.84	121.93	N/A
HAPs	7.20	172.73	31.52		3.62	15.86	N/A

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P5;S24: Corn Starch Storage Bins #20-36 — MDR (T/hr): 375 — STACK ID (DIAM:HEIGHT): 1';50'

(120-01-S thru 120-17-S) — YEARLY PROD (T/yr): 3285000 — FLOWRATE (ACFM): 7000

CNTRL DEV: Dust Collector — Ts(°F): 110

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 4-02-013-01			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.15	0.99	55.79	1,338.95	244.36		0.56	2.44	0.010
PM10	0.15	0.99	55.79	1,338.95	244.36		0.56	2.44	0.010
PM2.5	0.15	0.99	55.79	1,338.95	244.36		0.56	2.44	0.010
SOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
NOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
VOC	0	0	0.21	5.07	0.93		0.21	0.93	N/A
CO	0	0	0.00	0.00	0.00		0.00	0.00	N/A
HAPs	0	0	0.00	0.00	0.00		0.00	0.00	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.
Permit Limitation Pursuant to 326 IAC 6.8-2-8: 5 of 17 tanks at a time

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source			Moisture %	Temperature F			Potential to Emit	
ID	PPM	ACFM			SCFM	DSCFM	lb/hr	ton/yr
120-01-S	5	1400	5	110	1297	1232	0.04	0.19
120-02-S	5	1400	5	110	1297	1232	0.04	0.19
120-03-S	5	1400	5	110	1297	1232	0.04	0.19
120-04-S	5	1400	5	110	1297	1232	0.04	0.19
120-05-S	5	1400	5	110	1297	1232	0.04	0.19
120-06-S	5	1400	5	110	1297	1232	0.04	0.19
120-07-S	5	1400	5	110	1297	1232	0.04	0.19
120-08-S	5	1400	5	110	1297	1232	0.04	0.19
120-09-S	5	1400	5	110	1297	1232	0.04	0.19
120-10-S	5	1400	5	110	1297	1232	0.04	0.19
120-11-S	5	1400	5	110	1297	1232	0.04	0.19
120-12-S	5	1400	5	110	1297	1232	0.04	0.19
120-13-S	5	1400	5	110	1297	1232	0.04	0.19
120-14-S	5	1400	5	110	1297	1232	0.04	0.19
120-15-S	5	1400	5	110	1297	1232	0.04	0.19
120-16-S	5	1400	5	110	1297	1232	0.04	0.19
120-17-S	5	1400	5	110	1297	1232	0.04	0.19

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Cargill, Inc. SSM 089-36178-00203/Part 70 Renewal 089-36144-00203 Starch Production Area

P5;S25: Starch Ring Dryer #3 — MDR (T/hr): 26.55 — STACK ID (DIAM:HEIGHT): (7.33': 130')

(125-01-S) — YEARLY PROD (T/yr): 232578 — FLOWRATE (ACFM): 83140

CNTRL DEV: Entoleter Wet Vortex Scrubber (CE125-01-S) — Ts(°F): 111

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-54			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	5.42	0.977	143.80	3,451.09	629.82		3.31	14.49	0.005
PM10	5.42	0.977	143.80	3,451.09	629.82		3.31	14.49	0.005
PM2.5	5.42	0.977	143.80	3,451.09	629.82		3.31	14.49	0.005
SOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
NOx	0	0	0.00	0.00	0.00		0.00	0.00	N/A
VOC	0	0.5	29.93	718.32	131.09		14.97	65.55	N/A
CO	0	0	29.79	714.96	130.48		29.79	130.48	N/A
HAPs	0	0.5	7.23	173.59	31.68		3.62	15.84	N/A

EF calculated using alleged scrubber efficiency and Entoleter's guaranteed outlet loading of 0.005 grains at 83140 acfm and 111 °F (max 3.5 lbs/hr) from 5/27/98 application for scrubber replacement.
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

*VOC, CO and HAP emissions are based on stack test data from May 2007.

P5;S25A: Starch Ring Dryer #3 (125-01-S)
In-Process Fuel Combustion

MDC (mmBtu/hr): 62 — HEAT CONTENT (Btu/cft): 1020 — STACK ID (DIAM:HEIGHT): (7.33': 130')

CNTRL DEV: NONE — MDR (mmcft/hr): 0.0608 — QTY BURNED (mmcft/yr): 204.00 — FLOWRATE (ACFM): 83140

Ts(°F): 111

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-54			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	1.9	0	0.1155	2.7718	0.5058		0.1155	0.5058	0.0002
PM10	7.6	0	0.4620	11.0871	2.0234		0.4620	2.0234	0.0007
PM2.5	7.6	0	0.4620	11.0871	2.0234		0.4620	2.0234	0.0007
SOx	0.6	0	0.0365	0.8753	0.1597		0.0365	0.1597	N/A
NOx	100	0	6.0784	145.8824	26.6235		6.0784	26.6235	N/A
VOC	5.5	0	0.3343	8.0235	1.4643		0.3343	1.4643	N/A
CO	84	0	5.1059	122.5412	22.3638		5.1059	22.3638	N/A
Hexane	1.8	0	0.1094	2.6259	0.4792		0.1094	0.4792	N/A

E.F. based on AP-42 Chapter 1.4 and 40 CFR 98.
Emissions based on company's submittal of 8760 hours/year
No emission factors available for PM2.5, therefore IDEM assumes F

Total: Starch Ring Dryer #3 (125-01-S)

	POTENTIAL TO EMIT						
	BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	143.9109	3,453.8627	630.3299		3.4228	14.9918	0.0052
PM10	144.2574	3,462.1780	631.8475		3.7693	16.5093	0.0057
PM2.5	144.2574	3,462.1780	631.8475		3.7693	16.5093	0.0057
SOx	0.0365	0.8753	0.1597		0.0365	0.1597	N/A
NOx	6.0784	145.8824	26.6235		6.0784	26.6235	N/A
VOC	30.2643	726.3435	132.5577		15.2993	67.0110	N/A
CO	34.8959	837.5012	152.8440		34.8959	152.8440	N/A
HAPs	7.3424	176.2179	32.1598		3.7259	16.3195	N/A

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P5;S26: Waxy Corn Starch Storage Bins (#95-98) — MDR (T/hr): 20.5 — STACK ID (DIAM:HEIGHT): 1';64'

(126-01-S thru 126-04-S) — YEARLY PROD (T/yr): 179580 — FLOWRATE (ACFM): 2000

CNTRL DEV: Dust Collector (CE126-01-S through CE126-04-S) — Ts(°F): 104

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-014-01			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.79	0.99	16.109	386.626	70.559		0.161	0.706	0.010
PM10	0.79	0.99	16.109	386.626	70.559		0.161	0.706	0.010
PM2.5	0.79	0.99	16.109	386.626	70.559		0.161	0.706	0.010
SOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
VOC	0	0	0.045	1.083	0.198		0.045	0.198	N/A
CO	0	0	0.000	0.000	0.000		0.000	0.000	N/A
HAPs	0	0	0.000	0.000	0.000		0.000	0.000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.
Permit Limitation Pursuant to 326 IAC 6.8-2-8: 1 of 5 bins at a time

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source			Moisture %	Temperature F			Potential to Emit	
ID	PPM	ACFM			SCFM	DSCFM	lb/hr	ton/yr
126-01-S	5	1480	5	104	1386	1316	0.05	0.20
126-02-S	5	1480	5	104	1386	1316	0.05	0.20
126-03-S	5	1480	5	104	1386	1316	0.05	0.20
126-04-S	5	1480	5	104	1386	1316	0.05	0.20
126-05-S	5	1480	5	104	1386	1316	0.05	0.20

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Starch Production Area

P5;S27: Special Starch Process w/ Starch Ring Dryer #4 — MDR (T/hr): 12.5 — STACK ID (DIAM:HEIGHT): 6';30'

(128-01-S) — YEARLY PROD (T/yr): 109500 — FLOWRATE (ACFM): 60000

CNTRL DEV: Wet Scrubber (CE128-01-S) — Ts(°F): 104

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-54			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	13.53	0.98	169.15	4,059.57	740.87	3.38	14.82	0.007
PM10	13.53	0.98	169.15	4,059.57	740.87	3.38	14.82	0.007
PM2.5	13.53	0.98	169.15	4,059.57	740.87	3.38	14.82	0.007
SOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A
NOx	0	0	0.00	0.00	0.00	0.00	0.00	N/A
VOC	0	0.5	0.49	11.76	2.15	0.25	1.07	N/A
CO	0	0	4.81	115.44	21.07	4.81	21.07	N/A
HAPs	0	0.5	0.12	2.90	0.53	0.06	0.26	N/A

EF: back calculated using manufacturer's specifications of 0.007 gr/dscf grain loading

Actual Emissions based on 0.007 gr/dscf, and 8760 hrs/yr (company submittal)

No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

*VOC, CO and HAP emissions are based on stack test data from May 2007.

P5;S27A: Special Starch Process w/ Starch Ring Dryer #4 (128-01-S)

In-Process Fuel Combustion

MDC (mmBtu/hr): 30 — HEAT CONTENT (Btu/cft): 1020 — STACK ID (DIAM:HEIGHT): 6';30'

CNTRL DEV: NONE — MDR (mmcft/hr): 0.0294 — QTY BURNED (mmcft/yr): 98.70 — FLOWRATE (ACFM): 60000

Ts(°F): 104

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-007-54			POTENTIAL TO EMIT					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	1.9	0	0.056	1.341	0.245	0.056	0.245	0.000
PM10	7.6	0	0.224	5.365	0.979	0.224	0.979	0.000
PM2.5	7.6	0	0.2235	5.3647	0.9791	0.2235	0.9791	0.0005
SOx	0.6	0	0.018	0.424	0.077	0.018	0.077	N/A
NOx	100	0	2.941	70.588	12.882	2.941	12.882	N/A
VOC	5.5	0	0.162	3.882	0.709	0.162	0.709	N/A
CO	84	0	2.471	59.294	10.821	2.471	10.821	N/A
Hexane	1.8	0	0.053	1.271	0.232	0.053	0.232	N/A

E.F. based on AP-42 Chapter 1.4 and 40 CFR 98.

Emissions based on company's submittal of 8760 hours/year

No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

Total: Special Starch Process w/ Starch Ring Dryer #4 (128-01-S)

	POTENTIAL TO EMIT					
	BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	169.2048	4,060.9156	741.1171	3.4389	15.0622	0.0071
PM10	169.3725	4,064.9392	741.8514	3.6065	15.7965	0.0075
PM2.5	169.3725	4,064.9392	741.8514	3.6065	15.7965	0.0075
SOx	0.0176	0.4235	0.0773	0.0176	0.0773	N/A
NOx	2.9412	70.5882	12.8824	2.9412	12.8824	N/A
VOC	0.6518	15.6424	2.8547	0.4068	1.7816	N/A
CO	7.2806	174.7341	31.8890	7.2806	31.8890	N/A
HAPs	0.1739	4.1746	0.7619	0.1134	0.4969	N/A

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Cargill, Inc. SSM 089-36178-00203/Part 70 Renewal 089-36144-00203 Starch Production Area

Reactors #2- 8 (128-07-S through 128-13-S) MDR (batches/hr): 0.292 STACK ID (DIAM:HEIGHT): (1': 95)

YEARLY PROD (T/yr): N/A FLOWRATE (ACFM): 1000

CNTRL DEV: Thermal Oxidizer (PK9030) Ts(°F): 1300

Stack ID #5 PERMITTED OPERATING HRS: **8760** hr/yr

SCC NO. 3-02-014-01			POTENTIAL EMISSIONS						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/batch)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**		(lbs/hr)	(TPY)	(gr/dscf)
PM	0	0	0.00	0.00	**0.00**		0.00	0.00	0.000
PM10	0	0	0.00	0.00	**0.00**		0.00	0.00	0.000
PM2.5	0	0	0.00	0.00	**0.00**		0.00	0.00	0.000
SOx	0	0	0.00	0.00	**0.00**		0.00	0.00	N/A
NOx	0	0	0.00	0.00	**0.00**		0.00	0.00	N/A
VOC	10000	0.98	2,916.67	70,000.00	**12,775.00**		**58.33**	**255.50**	N/A
CO	0	0	0.00	0.00	**0.00**		0.00	0.00	N/A
HAPs	10000	0.98	2,916.67	70,000.00	**12,775.00**		58.33	255.50	N/A

HAPs: PO

based on max propylene oxide (PO) emissions of 5 tons/batch, 7 batches/day, 365 d/yr.

Thermal Oxidizer PK9030 MDC (mmBtu/hr): 1 HEAT CONTENT (Btu/cft): 1020 STACK ID (DIAM:HEIGHT): (1': 95)

(Natural Gas Combustion) MDR (mmcft/hr): 0.0010 QTY BURNED (mmcft/yr): 8.588 FLOWRATE (ACFM): 1000

Stack ID #5 Ts(°F): 1300

PERMITTED OPERATING HRS: **8760** hr/yr

SCC NO. 1-02-006-03			POTENTIAL EMISSIONS						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**		(lbs/hr)	(TPY)	(gr/dscf)
PM	1.9	0	0.002	0.045	0.008		0.002	0.008	0.001
PM10	7.6	0	0.007	0.179	0.033		0.007	0.033	0.003
PM2.5	7.6	0	0.0075	0.1788	0.0326		0.0075	0.0326	0.0029
SOx	0.6	0	0.001	0.014	0.003		0.001	0.003	N/A
NOx	100	0	0.098	2.353	0.429		0.098	0.429	N/A
VOC	5.5	0	0.005	0.129	0.024		0.005	0.024	N/A
CO	84	0	0.082	1.976	0.361		0.082	0.361	N/A
Hexane	1.8	0	0.002	0.042	0.008		0.002	0.008	N/A

E.F. based on AP-42 Chapter 1.4 and 40 CFR 98.

Emissions based on company's submittal of 8760 hours/year

No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

			POTENTIAL EMISSIONS						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**		(lbs/hr)	(TPY)	(gr/dscf)
PM	0	0	0.000	0.000	0.000		0.000	0.000	N/A
PM10	0	0	0.000	0.000	0.000		0.000	0.000	N/A
PM2.5	0	0	0.000	0.000	0.000		0.000	0.000	N/A
SOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
VOC	0	0.95	1.330	31.920	5.825		0.067	0.291	N/A
CO	0	0.95	8.610	206.640	37.712		0.431	1.886	N/A
Hexane	0	0.95	0.333	7.992	1.459		0.017	0.073	N/A

*VOC, CO and HAP emissions are based on stack test data from May 2007.

Total: Reactors #2- 8 (128-07-S through 128-13-S)

	POTENTIAL TO EMIT					
	BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	0.0019	0.0447	0.0082	0.0019	0.0082	0.0007
PM10	0.0075	0.1788	0.0326	0.0075	0.0326	0.0029
PM2.5	0.0075	0.1788	0.0326	0.0075	0.0326	0.0029
SOx	0.0006	0.0141	0.0026	0.0006	0.0026	N/A
NOx	0.0980	2.3529	0.4294	0.0980	0.4294	N/A
VOC	2,918.0021	70,032.0494	12,780.8490	58.4052	255.8149	N/A
CO	8.6924	10.5865	38.0725	0.5129	2.2463	N/A
HAPs	2,917.0014	70,000.3754	12,776.4663	58.3517	255.5807	N/A

****

Sodium Sulfate Storage Bin MDR (T/hr): 1.1 STACK ID (DIAM:HEIGHT):

(128-25-S) YEARLY PROD (T/yr): 9636 FLOWRATE (ACFM):

CNTRL DEV: Dust Collector (FA1900) Ts(°F):

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-05-011-05			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	2.1E-03	0.99	0.002	0.055	0.010		2.31E-05	1.01E-04	N/A
PM10	9.9E-04	0.99	0.001	0.026	0.005		1.09E-05	4.77E-05	N/A
PM2.5	9.9E-04	0.99	0.001	0.026	0.005		1.09E-05	4.77E-05	N/A
SOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
VOC	0	0	0.000	0.000	0.000		0.000	0.000	N/A
CO	0	0	0.000	0.000	0.000		0.000	0.000	N/A
HAPs	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A

E.F. based on AP-42 Chapter 11.12

No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

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Sodium Sulfate Weigh Bin MDR (T/hr): 1.1

(128-26-S) YEARLY PROD (T/yr): 9636

CNTRL DEV: Dust Collector (FA1950)

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-05-011-05			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	2.10E-03	0.99	0.002	0.055	0.010		2.31E-05	1.01E-04	N/A
PM10	9.90E-04	0.99	0.001	0.026	0.005		1.09E-05	4.77E-05	N/A
PM2.5	9.9E-04	0.99	0.001	0.026	0.005		1.09E-05	4.77E-05	N/A
SOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
VOC	0	0	0.000	0.000	0.000		0.000	0.000	N/A
CO	0	0	0.000	0.000	0.000		0.000	0.000	N/A
HAPs	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A

E.F. based on AP-42 Chapter 11.12

No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

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Cargill, Inc. SSM 089-36178-00203/Part 70 Renewal 089-36144-00203 Starch Production Area

P5;S33: Corn Starch Blending Systems #1-#4 — MDR (T/hr): 120 — STACK ID (DIAM:HEIGHT):

(130-01-S to 130-04-S) — YEARLY PROD (T/yr): 1051200 — FLOWRATE (ACFM): 5200

CNTRL DEV: Dust Collector (CE130-01-S through 130-04-S) — Ts(°F): 104

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-014-01			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.35	0.99	41.884	1,005.228	183.454		0.419	1.835	0.010
PM10	0.35	0.99	41.884	1,005.228	183.454		0.419	1.835	0.010
PM2.5	0.35	0.99	41.884	1,005.228	183.454		0.419	1.835	0.010
SOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
VOC	0	0	0.169	4.049	0.739		0.169	0.739	N/A
CO	0	0	0.000	0.000	0.000		0.000	0.000	N/A
HAPs	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	ton/yr
130-01-S	5	1300	5	70	1295	1230	0.04	0.18
130-02-S	5	1300	5	70	1295	1230	0.04	0.18
130-03-S	5	1300	5	70	1295	1230	0.04	0.18
130-04-S	5	1300	5	70	1295	1230	0.04	0.18

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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P5;S34: Dextrin Blender — MDR (T/hr): 30 — STACK ID (DIAM:HEIGHT):

(130-05-S) — YEARLY PROD (T/yr): 262800 — FLOWRATE (ACFM): 3000

CNTRL DEV: Dust Collector (CE130-05-S) — Ts(°F): 90

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 03-02-014-01			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.83	0.99	24.779	594.701	108.533		0.248	1.085	0.010
PM10	0.83	0.99	24.779	594.701	108.533		0.248	1.085	0.010
PM2.5	0.83	0.99	24.779	594.701	108.533		0.248	1.085	0.010
SOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
VOC	0	0	0.094	2.251	0.411		0.094	0.411	N/A
CO	0	0	0.000	0.000	0.000		0.000	0.000	N/A
HAPs	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	ton/yr
130-05-S	5	3000	5	90	2880	2736	0.09	0.41

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Unit ID Building 128 Tank Farm

CNTRL DEV: None

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	lb/day	ton/yr
BLDG 128 Tank Farm	10	1200	5	70	1195	1136	0.08	1.87	0.34

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)
Note: 100% of VOC are HAPs for this unit
Molecular Weight of Propane = 44

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P5;S29: Propylene Oxide Station - Outdoor — MDR (T/hr): 0.0001 — STACK ID (DIAM:HEIGHT): N/A

(128-14-S-F) — YEARLY PURCHASE (T/yr): 0.876 — FLOWRATE (ACFM): N/A

CNTRL DEV: None — Ts(°F): N/A

PERMITTED OPERATING HRS: 8760 hr/yr

(Fugitive Emissions) SCC NO. 03-02-007-52			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
PM10	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
PM2.5	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
SOx	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
NOx	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
VOC	2000	0	0.2000	4.8000	0.8760		0.2000	0.8760	N/A
CO	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
HAP	2000	0	0.2000	4.8000	0.8760		0.2000	0.8760	N/A

Emissions based on SOCMI factors

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Cargill, Inc. SSM 089-36178-00203/Part 70 Renewal 089-36144-00203 Starch Production Area

P5;S30: Building 128 PO Emissions — MDR (T/hr): 0.0004 — STACK ID (DIAM:HEIGHT): N/A

(128-15-S) — YEARLY PURCHASE (T/yr): 3.066 — FLOWRATE (ACFM): N/A

CNTRL DEV: None — Ts(°F): N/A

PERMITTED OPERATING HRS: 8760 hr/yr

(Fugitive Emissions)

SCC NO. 03-02-007-52

			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
PM10	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
PM2.5	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
SOx	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
NOx	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
VOC	2000	0	0.7000	16.8000	3.0660		0.7000	3.0660	N/A
CO	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
HAP	2000	0	0.7000	16.8000	3.0660		0.7000	3.0660	N/A

Emissions based on SOCMI factors

****

Unit ID 54-17-S — MDR (T/hr): 0.0001 — STACK ID (DIAM:HEIGHT): N/A

Building 54 PO Emissions — YEARLY PURCHASE (T/yr): 1.007 — FLOWRATE (ACFM): N/A

CNTRL DEV: None — Ts(°F): N/A

Vent through general building ventilation — PERMITTED OPERATING HRS: 8760 hr/yr

(Fugitive Emissions)

SCC NO. 03-02-007-52

			POTENTIAL TO EMIT						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
PM10	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
PM2.5	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000
SOx	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
NOx	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
VOC	2000	0	0.2300	5.5200	1.0074		0.2300	1.0074	N/A
CO	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A
HAP	2000	0	0.2300	5.5200	1.0074		0.2300	1.0074	N/A

Emissions based on SOCMI factors

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Propylene Oxide Storage Tank — MDR (gallons): 927936 — STACK ID (DIAM:HEIGHT): N/A

(93-18-S) — YEARLY PROD (gallons/yr): 927936 — FLOWRATE (ACFM): N/A

Ts(°F): N/A

PERMITTED OPERATING HRS: **8760** hr/yr

SCC NO. 4-07-208-03

			POTENTIAL EMISSIONS						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/1000gal)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**		(lbs/hr)	(TPY)	(gr/dscf)
PM	0	0	0.000	0.000	**0.000**		0.000	0.000	0
PM10	0	0	0.000	0.000	**0.000**		0.000	0.000	0
PM2.5	0	0	0.000	0.000	**0.000**		0.000	0.000	0
SOx	0	0	0.000	0.000	**0.000**		0.000	0.000	N/A
NOx	0	0	0.000	0.000	**0.000**		0.000	0.000	N/A
VOC		0	1.027	24.658	**4.500**		1.027	4.500	N/A
CO	0	0	0.000	0.000	**0.000**		0.000	0.000	N/A
HAPs		0	1.027	24.658	**4.500**		1.027	4.500	N/A

HAP: Propylene oxide

Total: Stack Emissions - Starch Production Area

	POTENTIAL TO EMIT						
	BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	908.712	21,809.094	3980.16		12.866	56.35	0.159
PM10	909.369	21,824.861	3983.04		13.525	59.24	0.162
PM2.5	909.369	21,824.861	3983.04		13.525	59.24	0.162
SOx	0.069	1.666	0.30		0.069	0.30	N/A
NOx	11.569	277.647	50.67		11.569	50.67	N/A
VOC	2,979.664	71,511.941	13050.93		90.552	396.62	N/A
CO	78.708	1,690.954	344.74		70.528	308.91	N/A
HAPs	2,932.742	70,378.156	12845.41		66.839	292.76	N/A

Total: Fugitive Emissions - Starch Production Area

	POTENTIAL TO EMIT						
	BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.000	0.000	0.00		0.000	0.00	0.000
PM10	0.000	0.000	0.00		0.000	0.00	0.000
PM2.5	0.000	0.000	0.00		0.000	0.00	0.000
SOx	0.000	0.000	0.00		0.000	0.00	N/A
NOx	0.000	0.000	0.00		0.000	0.00	N/A
VOC	1.130	27.120	4.95		1.130	4.95	N/A
CO	0.000	0.000	0.00		0.000	0.00	N/A
HAPs	1.130	27.120	4.95		1.130	4.95	N/A

Total: Emissions - Starch Production Area

	POTENTIAL TO EMIT						
	BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	908.712	21,809.094	3980.16		12.866	56.35	0.159
PM10	909.369	21,824.861	3983.04		13.525	59.24	0.162
PM2.5	909.369	21,824.861	3983.04		13.525	59.24	0.162
SOx	0.069	1.666	0.30		0.069	0.30	N/A
NOx	11.569	277.647	50.67		11.569	50.67	N/A
VOC	2,980.794	71,539.061	13055.88		91.682	401.57	N/A
CO	78.708	1,690.954	344.74		70.528	308.91	N/A
HAPs	2,933.872	70,405.276	12850.36		67.969	297.70	N/A

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Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Starch Warehouse Area

****

Channel 2 Filter Receiver — MDR (T/hr): 15 — STACK ID (DIAM:HEIGHT): (1': 77.5')

93-32-W — YEARLY PROD (T/yr): N/A — FLOWRATE (ACFM): 2400

CNTRL DEV: Bag Filter Dust Collector — Ts(°F): 90

PERMITTED OPERATING HRS: 8760 hr/yr

SCC # 3-02-005-40

AP-42 Factors			POTENTIAL EMISSIONS						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.0625	0.99	0.938	22.500	4.106		0.009	0.041	0.0005
PM10	0.01575	0.99	0.236	5.670	1.035		0.002	0.010	0.0001
PM2.5	0.00275	0.99	0.041	0.990	0.181		0.0004	0.002	0.00002
SOx	0	0	0	0	0		0	0	N/A
NOx	0	0	0	0	0		0	0	N/A
VOC	0	0	0.08	1.801	0.329		0.075	0.329	N/A
CO	0	0	0	0	0		0	0	N/A
HAPs	0	0	0	0	0		0	0	N/A

Emission factors obtained from the AP-42, Section 9.9.1 Grain Elevators and Processes (Storage Bin).

(PM) EF = 0.025 lb/ton * 2.5 = 0.06 lb/ton (PM10) EF = 0.0063 lb/ton * 2.5 = 0.01575 lb/ton (PM2.5) EF = 0.0011lb/ton*2.5 = 0.00275lb/ton

Emission Factor is multiplied by the Dustiness Ratio (DR), DR for corn = 2.5

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source			Moisture %	Temperature F			Potential to Emit	
ID	PPM	ACFM			SCFM	DSCFM	lb/hr	ton/yr
93-32-W	5	2400	5	90	2304	2189	0.08	0.33

Methodology

SCFM = ACFM * (528 / (460 - Temperature F))

DSCFM = ACFM * (1 - Moisture %)

VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))

VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Channel 3 Filter Receiver — MDR (T/hr): 25 — STACK ID (DIAM:HEIGHT): (1': 77.5')

93-33-W — YEARLY PROD (T/yr): N/A — FLOWRATE (ACFM): 2400

CNTRL DEV: Bag Filter Dust Collector — Ts(°F): 90

PERMITTED OPERATING HRS: 8760 hr/yr

SCC # 3-02-005-40

AP-42 Factors			POTENTIAL EMISSIONS						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.0625	0.99	1.563	37.500	6.844		0.016	0.068	0.0008
PM10	0.01575	0.99	0.394	9.450	1.725		0.004	0.017	0.0002
PM2.5	0.00275	0.99	0.069	1.650	0.301		0.0007	0.003	0.00003
SOx	0	0	0	0	0		0	0	N/A
NOx	0	0	0	0	0		0	0	N/A
VOC	0	0	0.08	1.801	0.329		0.075	0.329	N/A
CO	0	0	0	0	0		0	0	N/A
HAPs	0	0	0	0	0		0	0	N/A

Emission factors obtained from the AP-42, Section 9.9.1 Grain Elevators and Processes (Storage Bin).

(PM) EF = 0.025 lb/ton * 2.5 = 0.06 lb/ton (PM10) EF = 0.0063 lb/ton * 2.5 = 0.01575 lb/ton (PM2.5) EF = 0.0011lb/ton*2.5 = 0.00275lb/ton

Emission Factor is multiplied by the Dustiness Ratio (DR), DR for corn = 2.5

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source			Moisture %	Temperature F			Potential to Emit	
ID	PPM	ACFM			SCFM	DSCFM	lb/hr	ton/yr
93-33-W	5	2400	5	90	2304	2189	0.08	0.33

Methodology

SCFM = ACFM * (528 / (460 - Temperature F))

DSCFM = ACFM * (1 - Moisture %)

VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))

VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Channel 2/3 Packing — MDR (T/hr): 40 — STACK ID (DIAM:HEIGHT): (2': 10')

93-36-W — YEARLY PROD (T/yr): N/A — FLOWRATE (ACFM): 12000

CNTRL DEV: Bag Filter Dust Collector — Ts(°F): 70

PERMITTED OPERATING HRS: 8760 hr/yr

SCC # 3-02-005-30

AP-42 Factors			POTENTIAL EMISSIONS						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.1525	0.99	6.100	146.400	26.718		0.061	0.267	0.0006
PM10	0.085	0.99	3.400	81.600	14.892		0.034	0.149	0.0003
PM2.5	0.0145	0.99	0.580	13.920	2.540		0.006	0.025	0.0001
SOx	0	0	0	0	0		0	0	N/A
NOx	0	0	0	0	0		0	0	N/A
VOC	0	0	0.39	9.345	1.705		0.389	1.705	N/A
CO	0	0	0	0	0		0	0	N/A
HAPs	0	0	0	0	0		0	0	N/A

Emission factors obtained from the AP-42, Section 9.9.1 Grain Elevators and Processes (Headhouse & Grain Handling).

(PM) EF = 0.061 lb/ton * 2.5 = 0.1525 lb/ton (PM10) EF = 0.034 lb/ton * 2.5 = 0.085 lb/ton (PM2.5)EF= 0.0058 lb/ton * 2.5 = 0.0145 lb/ton

Emission Factor is multiplied by the Dustiness Ratio (DR), DR for corn = 2.5

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source			Moisture %	Temperature F			Potential to Emit	
ID	PPM	ACFM			SCFM	DSCFM	lb/hr	ton/yr
93-36-W	5	12000	5	70	11955	11357	0.39	1.71

Methodology

SCFM = ACFM * (528 / (460 - Temperature F))

DSCFM = ACFM * (1 - Moisture %)

VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))

VOC Emissions (ton/yr) = VOC Emissions (lb/hr\) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Starch Warehouse Area
Central Vacuum System — MDR (T/hr): 0.05 — STACK ID (DIAM:HEIGHT):
93-38-W — YEARLY PROD (T/yr): N/A — FLOWRATE (ACFM):
CNTRL DEV: Bag Filter Dust Collector — Ts(°F):

PERMITTED OPERATING HRS: 8760 hr/yr

SCC # 3-02-005-30

AP-42 Factors			POTENTIAL EMISSIONS						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.1525	0.99	0.008	0.183	0.033		0.000	0.000	N/A
PM10	0.085	0.99	0.004	0.102	0.019		0.000	0.000	N/A
PM2.5	0.0145	0.99	0.001	0.017	0.003		0.000	0.000	N/A
SOx	0	0	0	0	0		0	0	N/A
NOx	0	0	0	0	0		0	0	N/A
VOC	0	0	0.02	0.39	0.07		0.02	0.07	N/A
CO	0	0	0	0	0		0	0	N/A
HAPs	0	0	0	0	0		0	0	N/A

Emission factors obtained from the AP-42, Section 9.9.1 Grain Elevators and Processes (Headhouse & Grain Handling).
(PM) EF = 0.061 lb/ton * 2.5 = 0.1525 lb/ton (PM10) EF = 0.034 lb/ton * 2.5 = 0.085 lb/ton (PM2.5)EF= 0.0058 lb/ton * 2.5 = 0.0145 lb/ton
Emission Factor is multiplied by the Dustiness Ratio (DR), DR for corn = 2.5

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
93-38-W	5	500	5	70	498	473	0.02	0.07

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Channel 4 Filter Receiver — MDR (T/hr): 15 — STACK ID (DIAM:HEIGHT): (1': 77.5')
93-34-W — YEARLY PROD (T/yr): N/A — FLOWRATE (ACFM): 2400
CNTRL DEV: Bag Filter Dust Collector — Ts(°F): 90

PERMITTED OPERATING HRS: 8760 hr/yr

SCC # 3-02-005-40

AP-42 Factors			POTENTIAL EMISSIONS						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.0625	0.99	0.938	22.500	4.106		0.009	0.041	0.0005
PM10	0.01575	0.99	0.236	5.670	1.035		0.002	0.010	0.0001
PM2.5	0.00275	0.99	0.041	0.990	0.181		0.0004	0.002	0.00002
SOx	0	0	0	0	0		0	0	N/A
NOx	0	0	0	0	0		0	0	N/A
VOC	0	0	0.08	1.80	0.33		0.08	0.33	N/A
CO	0	0	0	0	0		0	0	N/A
HAPs	0	0	0	0	0		0	0	N/A

Emission factors obtained from the AP-42, Section 9.9.1 Grain Elevators and Processes (Storage Bin).
(PM) EF = 0.025 lb/ton * 2.5 = 0.06 lb/ton (PM10) EF = 0.0063 lb/ton * 2.5 = 0.01575 lb/ton (PM2.5) EF = 0.0011lb/ton*2.5 = 0.00275lb/ton
Emission Factor is multiplied by the Dustiness Ratio (DR), DR for corn = 2.5

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
93-34-W	5	2400	5	90	2304	2189	0.08	0.33

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Channel 6 Receiver — MDR (T/hr): 4.5 — STACK ID (DIAM:HEIGHT): (1': 77.5')
93-35-W — YEARLY PROD (T/yr): N/A — FLOWRATE (ACFM): 2400
CNTRL DEV: Bag Filter Dust Collector — Ts(°F): 90

PERMITTED OPERATING HRS: 8760 hr/yr

SCC # 3-02-005-40

AP-42 Factors			POTENTIAL EMISSIONS						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.0625	0.99	0.281	6.750	1.232		0.003	0.012	0.0001
PM10	0.01575	0.99	0.071	1.701	0.310		0.001	0.003	0.0000
PM2.5	0.00275	0.99	0.012	0.297	0.054		0.0001	0.001	0.00001
SOx	0	0	0	0	0		0	0	N/A
NOx	0	0	0	0	0		0	0	N/A
VOC	0	0	0.06	1.50	0.27		0.06	0.27	N/A
CO	0	0	0	0	0		0	0	N/A
HAPs	0	0	0	0	0		0	0	N/A

Emission factors obtained from the AP-42, Section 9.9.1 Grain Elevators and Processes (Storage Bin).
(PM) EF = 0.025 lb/ton * 2.5 = 0.06 lb/ton (PM10) EF = 0.0063 lb/ton * 2.5 = 0.01575 lb/ton (PM2.5) EF = 0.0011lb/ton*2.5 = 0.00275lb/ton
Emission Factor is multiplied by the Dustiness Ratio (DR), DR for corn = 2.5

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
93-35-W	5	2000	5	90	1920	1824	0.06	0.27

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Starch Warehouse Area
Channel 4/6 Packing — MDR (T/hr): 40 — STACK ID (DIAM:HEIGHT): (2': 10')
93-37-W — YEARLY PROD (T/yr): N/A — FLOWRATE (ACFM): 12000
CNTRL DEV: Bag Filter Dust Collector — Ts(°F): 70

PERMITTED OPERATING HRS: 8760 hr/yr

SCC # 3-02-005-30			POTENTIAL EMISSIONS						
AP-42 Factors			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.1525	0.99	6.100	146.400	26.718		0.061	0.267	0.0006
PM10	0.085	0.99	3.400	81.600	14.892		0.034	0.149	0.0003
PM2.5	0.0145	0.99	0.580	13.920	2.540		0.006	0.025	0.0001
SOx	0	0	0	0	0		0	0	N/A
NOx	0	0	0	0	0		0	0	N/A
VOC	0	0	0.389	9.345	1.705		0.389	1.705	N/A
CO	0	0	0	0	0		0	0	N/A
HAPs	0	0	0	0	0		0	0	N/A

Emission factors obtained from the AP-42, Section 9.9.1 Grain Elevators and Processes (Headhouse & Grain Handling).
(PM) EF = 0.061 lb/ton * 2.5 = 0.1525 lb/ton (PM10) EF = 0.034 lb/ton * 2.5 = 0.085 lb/ton (PM2.5)EF= 0.0058 lb/ton * 2.5 = 0.0145 lb/ton
Emission Factor is multiplied by the Dustiness Ratio (DR), DR for corn = 2.5

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
93-37-W	5	12000	5	70	11955	11357	0.39	1.71

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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P6;S2: Dried Corn Syrup Conveying System — MDR (T/hr): 15 — STACK ID (DIAM:HEIGHT): 1';65'
(93-04-W) — YEARLY PROD (T/yr): 131400 — FLOWRATE (ACFM): 800
CNTRL DEV: Dust Collector (CE93-04-W) — Ts(°F): 70

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO.			POTENTIAL EMISSIONS						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.46	0.99	6.857	164.571	30.034		0.069	0.300	0.010
PM10	0.46	0.99	6.857	164.571	30.034		0.069	0.300	0.010
PM2.5	0.46	0.99	6.857	164.571	30.034		0.069	0.300	0.010
SOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
VOC	0	0	0.026	0.623	0.114		0.026	0.114	N/A
CO	0	0	0.000	0.000	0.000		0.000	0.000	N/A
HAPs	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
93-04-W	5	800	5	70	797	757	0.03	0.11

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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P6;S3: Corn Syrup Solids Conveying System — MDR (T/hr): 10 — STACK ID (DIAM:HEIGHT): 1';45'
(93-05-W) — YEARLY PROD (T/yr): 87600 — FLOWRATE (ACFM): 800
CNTRL DEV: Dust Collector (CE93-05-W) — Ts(°F): 90

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO.			POTENTIAL EMISSIONS						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.66	0.99	6.608	158.587	28.942		0.066	0.289	0.010
PM10	0.66	0.99	6.608	158.587	28.942		0.066	0.289	0.010
PM2.5	0.66	0.99	6.608	158.587	28.942		0.066	0.289	0.010
SOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
VOC	0	0	0.026	0.623	0.114		0.026	0.114	N/A
CO	0	0	0.000	0.000	0.000		0.000	0.000	N/A
HAPs	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
93-05-W	5	800	5	70	797	757	0.03	0.11

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Starch Warehouse Area

P6;S5: Frodex Semi-Bulk Packing System — MDR (T/hr): 10 — STACK ID (DIAM:HEIGHT): 1';25'

(93-08-W) — YEARLY PROD (T/yr): 87600 — FLOWRATE (ACFM): 1000

CNTRL DEV: Dust Collector (CE93-08-W) — Ts(°F): 90

PERMITTED OPERATING HRS: 8760 hr/yr

			POTENTIAL EMISSIONS						
	SCC NO.		BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.83	0.99	8.260	198.234	36.178		0.083	0.362	0.010
PM10	0.83	0.99	8.260	198.234	36.178		0.083	0.362	0.010
PM2.5	0.83	0.99	8.260	198.234	36.178		0.083	0.362	0.010
SOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
VOC	0	0	0.031	0.750	0.137		0.031	0.137	N/A
CO	0	0	0.000	0.000	0.000		0.000	0.000	N/A
HAPs	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source			Moisture %	Temperature F			Potential to Emit	
ID	PPM	ACFM			SCFM	DSCFM	lb/hr	ton/yr
93-08-W	5	1000	5	90	960	912	0.03	0.14

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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P6;S6: Cornstarch Bag Dumping Station #1 and #2 — MDR (T/hr): 2.4 — STACK ID (DIAM:HEIGHT): 1';10'

(93-09-W and 93-10-W) — YEARLY PROD (T/yr): 21024 — FLOWRATE (ACFM): 1200

CNTRL DEV: Dust Collector (CE93-09-W & CE93-10-W) — Ts(°F): 90

PERMITTED OPERATING HRS: 8760 hr/yr

			POTENTIAL EMISSIONS						
	SCC NO.		BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	4.13	0.99	9.912	237.881	43.413		0.099	0.434	0.010
PM10	4.13	0.99	9.912	237.881	43.413		0.099	0.434	0.010
PM2.5	4.13	0.99	9.912	237.881	43.413		0.099	0.434	0.010
SOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
VOC	0	0	0.039	0.934	0.171		0.039	0.171	N/A
CO	0	0	0.000	0.000	0.000		0.000	0.000	N/A
HAPs	0	0	0.0000	0.0000	0.0000		0.0000	0.0000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source			Moisture %	Temperature F			Potential to Emit	
ID	PPM	ACFM			SCFM	DSCFM	lb/hr	ton/yr
93-09-W	5	600	5	70	598	568	0.02	0.09
93-10-W	5	600	5	70	598	568	0.02	0.09

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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P6;S7: Starch Bulk Loading — MDR (T/hr): 30 — STACK ID (DIAM:HEIGHT): 1';68'

(93-14-W) — YEARLY PROD (T/yr): 262800 — FLOWRATE (ACFM): 3300

CNTRL DEV: Dust Collector (CE93-14-W) — Ts(°F): 90

PERMITTED OPERATING HRS: 8760 hr/yr

			POTENTIAL EMISSIONS						
	SCC NO. 4-02-013-01		BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.91	0.99	27.257	654.171	119.386		0.273	1.194	0.010
PM10	0.91	0.99	27.257	654.171	119.386		0.273	1.194	0.010
PM2.5	0.91	0.99	27.257	654.171	119.386		0.273	1.194	0.010
SOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
VOC	0	0	0.095	2.270	0.414		0.095	0.414	N/A
CO	0	0	0.000	0.000	0.000		0.000	0.000	N/A
HAPs	0	0	0.000	0.000	0.000		0.000	0.000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source			Moisture %	Temperature F			Potential to Emit	
ID	PPM	ACFM			SCFM	DSCFM	lb/hr	ton/yr
93-14-W	5	3300	5	140	2904	2759	0.09	0.41

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Starch Warehouse Area

P6;S8: Starch Bulk Loading Vacuum Cleanup System — MDR (T/hr): 1 — STACK ID (DIAM:HEIGHT): 1';15'
(93-15-W) — YEARLY PROD (T/yr): 8760 — FLOWRATE (ACFM): 250
CNTRL DEV: Dust Collector (CE93-15-W) — Ts(°F): 90

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 4-02-013-01			POTENTIAL EMISSIONS					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	2.06	0.99	2.065	49.558	9.044	0.021	0.090	0.010
PM10	2.06	0.99	2.065	49.558	9.044	0.021	0.090	0.010
PM2.5	2.06	0.99	2.065	49.558	9.044	0.021	0.090	0.010
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
VOC	0	0	0.008	0.195	0.036	0.008	0.036	N/A
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A

EF: back calculated using manufacturer's specifications of 0.01 gr/dscf grain loading
Actual Emissions based on 0.01 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
93-15-W	5	250	5	70	249	237	0.01	0.04

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

****

P6;S9: Starch Mixing and Bagging System #1 — MDR (T/hr): 25 — STACK ID (DIAM:HEIGHT): 1';19'
(93-16-W) — YEARLY PROD (T/yr): 219000 — FLOWRATE (ACFM): 1570
CNTRL DEV: Dust Collector (CE93-16-W) — Ts(°F): 90

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO.			POTENTIAL EMISSIONS					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	1.04	0.99	25.936	622.454	113.598	0.259	1.136	0.020
PM10	1.04	0.99	25.936	622.454	113.598	0.259	1.136	0.020
PM2.5	1.04	0.99	25.936	622.454	113.598	0.259	1.136	0.020
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
VOC	0	0	0.047	1.126	0.205	0.047	0.205	N/A
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A

EF: back calculated using manufacturer's specifications of 0.02 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
93-16-W	5	1500	5	90	1440	1368	0.05	0.21

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

****

P6;S10: Starch Mixing and Bagging System #2 — MDR (T/hr): 12.5 — STACK ID (DIAM:HEIGHT): 1';33'
(93-17-W) — YEARLY PROD (T/yr): 109500 — FLOWRATE (ACFM): 3200
CNTRL DEV: Dust Collector (CE93-17-W) — Ts(°F): 90

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO.			POTENTIAL EMISSIONS					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	4.23	0.99	52.862	1,268.696	231.537	0.529	2.315	0.020
PM10	4.23	0.99	52.862	1,268.696	231.537	0.529	2.315	0.020
PM2.5	4.23	0.99	52.862	1,268.696	231.537	0.529	2.315	0.020
SOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000	0.000	0.000	N/A
VOC	0	0	0.100	2.401	0.438	0.100	0.438	N/A
CO	0	0	0.000	0.000	0.000	0.000	0.000	N/A
HAPs	0	0	0.000	0.000	0.000	0.000	0.000	N/A

EF: back calculated using manufacturer's specifications of 0.02 gr/dscf grain loading
Actual Emissions based on 0.02 gr/dscf, and 8760 hrs/yr (company submittal)
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
93-17-W	5	3200	5	90	3072	2918	0.10	0.44

Methodology
SCFM = ACFM * (528 / (460 - Temperature F))
DSCFM = ACFM * (1 - Moisture %)
VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))
VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

****

Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Starch Warehouse Area

P. G. Starch Receiver — MDR (T/hr): 3 — STACK ID (DIAM:HEIGHT):

93-18-W — YEARLY PROD (T/yr): N/A — FLOWRATE (ACFM):

CNTRL DEV: Dust Collector (CE93-18-W) — Ts(°F):

PERMITTED OPERATING HRS: 8760 hr/yr

SCC # 3-02-005-30

	AP-42 Factors		POTENTIAL EMISSIONS						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.1525	0.99	0.458	10.980	2.004		0.005	0.020	N/A
PM10	0.085	0.99	0.255	6.120	1.117		0.003	0.011	N/A
PM2.5	0.0145	0.99	0.044	1.044	0.191		0.000	0.002	N/A
SOx	0	0	0	0	0		0	0	N/A
NOx	0	0	0	0	0		0	0	N/A
VOC	0	0	0.13	3.115	0.568		0.130	0.568	N/A
CO	0	0	0	0	0		0	0	N/A
HAPs	0	0	0	0	0		0	0	N/A

Emission factors obtained from the AP-42, Section 9.9.1 Grain Elevators and Processes (Headhouse & Grain Handling).

(PM) EF = 0.061 lb/ton * 2.5 = 0.1525 lb/ton (PM10) EF = 0.034 lb/ton * 2.5 = 0.085 lb/ton (PM2.5)EF= 0.0058 lb/ton * 2.5 = 0.0145 lb/ton

Emission Factor is multiplied by the Dustiness Ratio (DR), DR for corn = 2.5

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
93-18-W	5	4000	5	70	3985	3786	0.13	0.57

Methodology

SCFM = ACFM * (528 / (460 - Temperature F))

DSCFM = ACFM * (1 - Moisture %)

VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))

VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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P. G. Starch Packing — MDR (T/hr): 3 — STACK ID (DIAM:HEIGHT):

93-39-W — YEARLY PROD (T/yr): N/A — FLOWRATE (ACFM):

CNTRL DEV: Dust Collector (CE93-39-W) — Ts(°F):

PERMITTED OPERATING HRS: 8760 hr/yr

SCC # 3-02-005-30

	AP-42 Factors		POTENTIAL EMISSIONS						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	0.1525	0.99	0.458	10.980	2.004		0.005	0.020	N/A
PM10	0.085	0.99	0.255	6.120	1.117		0.003	0.011	N/A
PM2.5	0.0145	0.99	0.044	1.044	0.191		0.000	0.002	N/A
SOx	0	0	0	0	0		0	0	N/A
NOx	0	0	0	0	0		0	0	N/A
VOC	0	0	0.05	1.16811548	0.213181075		0.048671478	0.213181075	N/A
CO	0	0	0	0	0		0	0	N/A
HAPs	0	0	0	0	0		0	0	N/A

Emission factors obtained from the AP-42, Section 9.9.1 Grain Elevators and Processes (Headhouse & Grain Handling).

(PM) EF = 0.061 lb/ton * 2.5 = 0.1525 lb/ton (PM10) EF = 0.034 lb/ton * 2.5 = 0.085 lb/ton (PM2.5)EF= 0.0058 lb/ton * 2.5 = 0.0145 lb/ton

Emission Factor is multiplied by the Dustiness Ratio (DR), DR for corn = 2.5

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
93-39-W	5	1500	5	70	1494	1420	0.05	0.21

Methodology

SCFM = ACFM * (528 / (460 - Temperature F))

DSCFM = ACFM * (1 - Moisture %)

VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))

VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

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Corn Syrup Solids Manufacturing System #5 — MDR (T/hr): 3 — STACK ID (DIAM:HEIGHT): TBD

(93-40-W) — YEARLY PROD (T/yr): 26280 — FLOWRATE (ACFM): 2000

CNTRL DEV: Dust Collector (CE93-40-W) — Ts(°F): 105

PERMITTED OPERATING HRS: 8760 hr/yr

	SCC NO.		POTENTIAL EMISSIONS						
			BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	1.34	0.98	4.020	96.485	17.609		0.080	0.352	0.005
PM10	1.34	0.98	4.020	96.485	17.609		0.080	0.352	0.005
PM2.5	1.34	0.98	4.020	96.485	17.609		0.080	0.352	0.005
SOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
NOx	0	0	0.000	0.000	0.000		0.000	0.000	N/A
VOC	0	0	0.244	5.844	1.067		0.244	1.067	N/A
CO	0	0	0.000	0.000	0.000		0.000	0.000	N/A
HAPs	0	0	0.000	0.000	0.000		0.000	0.000	N/A

EF: back calculated using manufacturer's specifications of 0.005 gr/dscf grain loading

Actual Emissions based on 0.005 gr/dscf, and 8760 hrs/yr (company submittal)

No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

VOC Emissions Assumptions: PPM as propane; Standard temp = 68F;

Source ID	PPM	ACFM	Moisture %	Temperature F	SCFM	DSCFM	Potential to Emit lb/hr	Potential to Emit ton/yr
93-40-W	20	2000	5	105	1869	1776	0.24	1.07

Methodology

SCFM = ACFM * (528 / (460 - Temperature F))

DSCFM = ACFM * (1 - Moisture %)

VOC Emissions (lb/hr) = 60 (min/hr) * DSCFM * (PPM * MW / (385.1 * 10^6))

VOC Emissions (ton/yr) = VOC Emissions (lb/hr) * 8, 760 (hr/yr) / 2,000 (lb/hr)

Molecular Weight of Propane = 44

****

Total: Starch Warehouse Area

	POTENTIAL EMISSIONS						
	BEFORE CONTROLS				AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)		(lbs/hr)	(TPY)	(gr/dscf)
PM	160.618	3,854.831	703.507		1.646	7.211	0.108
PM10	152.028	3,648.671	665.882		1.560	6.835	0.106
PM2.5	145.188	3,484.511	635.923		1.492	6.535	0.105
SOx	0.000	0.000	0.00		0.000	0.00	N/A
NOx	0.000	0.000	0.00		0.000	0.00	N/A
VOC	1.876	45.033	8.219		1.876	8.219	N/A
CO	0.000	0.000	0.00		0.000	0.00	N/A
HAPs	0.000	0.000	0.00		0.000	0.00	N/A

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Cargill, Inc. SSM 089-36416-00203/Part 70 Renewal 089-36144-00203 Channel 3 Refinery Area

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Diatomaceous Earth Unloading Silo (104-08-R) MDR (T/hr): 1.75 STACK ID (DIAM:HEIGHT): (0.5': 85')
104B RR track YEARLY PROD (T/yr): 15330 FLOWRATE (ACFM): 750
CNTRL DEV: Smoot Bin Vent Filter Ts(°F): 68
DC2312 PERMITTED OPERATING HRS: **8760** hr/yr

3-05-011-04			POTENTIAL EMISSIONS					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)
PM	0.0035	0.99	0.006	0.049	**0.027**	6.13E-05	2.68E-04	0.000
PM10	0.0017	0.99	0.003	0.024	**0.013**	2.98E-05	1.30E-04	0.000
PM2.5	0.0017	0.99	0.003	0.024	**0.013**	2.98E-05	1.30E-04	0.000
SOx	0	0	0.000	0.000	**0.000**	0.000	0.000	N/A
NOx	0	0	0.000	0.000	**0.000**	0.000	0.000	N/A
VOC	0	0	0.000	0.000	**0.000**	0.000	0.000	N/A
CO	0	0	0.000	0.000	**0.000**	0.000	0.000	N/A
HAPs	0	0	0.000	0.000	**0.000**	0.000	0.000	N/A

E.F. based on AP-42 Chapter 11.12
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

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Citric Acid Dump Station - DC (104-09-R) MDR (T/hr): 0.015 STACK ID (DIAM:HEIGHT): (0.5': 40')
CNTRL DEV: dust collector - (CE104-09-R) YEARLY PROD (T/yr): 131.4 FLOWRATE (ACFM): 300
Ts(°F): 68
PERMITTED OPERATING HRS: **8760** hr/yr

3-05-011-01			POTENTIAL EMISSIONS					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(LB/T)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)
PM	0.2	0.99	0.003	0.072	**0.013**	3.00E-05	0.0001	0.0000
PM10	0.058	0.99	0.001	0.021	**0.004**	8.70E-06	3.81E-05	0.0000
PM2.5	0.058	0.99	0.001	0.021	**0.004**	8.70E-06	3.81E-05	0.0000
SOx	0	0	0.000	0.000	**0.000**	0.000	0.000	N/A
NOx	0	0	0.000	0.000	**0.000**	0.000	0.000	N/A
VOC	0	0	0.000	0.000	**0.000**	0.000	0.000	N/A
CO	0	0	0.000	0.000	**0.000**	0.000	0.000	N/A
HAPs	0	0	0.000	0.000	**0.000**	0.000	0.000	N/A

Emission Factor (EF) from FIRE Version 5.0 - general material handling.
No emission factors available for PM2.5, therefore IDEM assumes PM2.5 is equivalent to PM10.

Totals - Channel 3 Refinery

	POTENTIAL EMISSIONS					
	BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)
PM	0.009	0.121	**0.04**	9.13E-05	**4.00E-04**	0.000
PM10	0.004	0.045	**0.02**	3.85E-05	**1.68E-04**	0.000
PM2.5	0.004	0.045	**0.02**	3.85E-05	**1.68E-04**	0.000
SOx	0.000	0.000	**0.0**	0.000	**0.0**	N/A
NOx	0.000	0.000	**0.0**	0.000	**0.0**	N/A
VOC	0.000	0.000	**0.0**	0.000	**0.0**	N/A
CO	0.000	0.000	**0.0**	0.000	**0.0**	N/A
HAPs	0.000	0.000	**0.0**	0.000	**0.0**	N/A

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

Carol S. Comer
Commissioner

January 8, 2016

Mr. Michael Golando
Cargill, Inc.
1100 Indianapolis Blvd.
Hammond, IN 46320

Re: Public Notice
Cargill, Inc.
Permit Level: Title V Significant Source Modification and Title V Operating Permit Renewal
Permit Number: 089-36416-00203 and 089-36144-00203

Dear Mr. Golando:

Enclosed is a copy of your draft Title V Significant Source Modification and Title V Operating Permit Renewal, Technical Support Document, emission calculations, and the Public Notice which will be printed in your local newspaper.

The Office of Air Quality (OAQ) has prepared two versions of the Public Notice Document. The abbreviated version will be published in the newspaper, and the more detailed version will be made available on the IDEM's website and provided to interested parties. Both versions are included for your reference. The OAQ has requested that the Post Tribune in Merrillville, Indiana and The Times in Munster, Indiana publish the abbreviated version of the public notice no later than January 13, 2016. You will not be responsible for collecting any comments, nor are you responsible for having the notice published in the newspaper.

OAQ has submitted the draft permit package to the Hammond Public Library, 564 East State Street in Hammond, Indiana. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Madhurima Moulik, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 3-0868 or dial (317) 233-0868.

Sincerely,

Vivian Haun

Vivian Haun
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover letter 8/27/2015

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Governor

Carol S. Comer
Commissioner

ATTENTION: PUBLIC NOTICES, LEGAL ADVERTISING

January 8, 2016

The Post Tribune
1433 E. 83rd Avenue
Merrillville, IN 46410

Enclosed, please find one Indiana Department of Environmental Management Notice of Public Comment for Cargill, Inc., Lake County, Indiana.

Since our agency must comply with requirements which call for a Notice of Public Comment, we request that you print this notice one time, no later than January 13, 2016.

Please send a notarized form, clippings showing the date of publication, and the billing to the Indiana Department of Environmental Management, Accounting, Room N1345, 100 North Senate Avenue, Indianapolis, Indiana, 46204.

To ensure proper payment, please reference account # 100174737.

We are required by the Auditor's Office to request that you place the Federal ID Number on all claims. If you have any conflicts, questions, or problems with the publishing of this notice or if you do not receive complete public notice information for this notice, please call Vivian Haun at 800-451-6027 and ask for extension 3-6878 or dial 317-233-6878.

Sincerely,

Vivian Haun

Vivian Haun
Permit Branch
Office of Air Quality

Permit Level: Title V Significant Source Modification and
Title V Operating Permit Renewal
Permit Number: 089-36416-00203 and 089-36144-00203

Enclosure
PN Newspaper.dot 8/27/2015

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Michael R. Pence
Governor

Carol S. Comer
Commissioner

ATTENTION: PUBLIC NOTICES, LEGAL ADVERTISING

January 8, 2016

The Times
601 West 45th Avenue
Munster, IN 46321

Enclosed, please find one Indiana Department of Environmental Management Notice of Public Comment for Cargill, Inc., Lake County, Indiana.

Since our agency must comply with requirements which call for a Notice of Public Comment, we request that you print this notice one time, no later than January 13, 2016.

Please send a notarized form, clippings showing the date of publication, and the billing to the Indiana Department of Environmental Management, Accounting, Room N1345, 100 North Senate Avenue, Indianapolis, Indiana, 46204.

To ensure proper payment, please reference account # 100174737.

We are required by the Auditor's Office to request that you place the Federal ID Number on all claims. If you have any conflicts, questions, or problems with the publishing of this notice or if you do not receive complete public notice information for this notice, please call Vivian Haun at 800-451-6027 and ask for extension 3-6878 or dial 317-233-6878.

Sincerely,

Vivian Haun

Vivian Haun
Permit Branch
Office of Air Quality

Permit Level: Title V Significant Source Modification and
Title V Operating Permit Renewal
Permit Number: 089-36416-00203 and 089-36144-00203

Enclosure
PN Newspaper.dot 8/27/2015

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

Carol S. Comer
Commissioner

January 8, 2016

To: Hammond Public Library

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

Subject: **Important Information to Display Regarding a Public Notice for an Air Permit**

Applicant Name: Cargill, Inc.
Permit Number: 089-36416-00203 and 089-36144-00203

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Request to publish the Notice of 30-day Period for Public Comment
- Draft Permit and Technical Support Document

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. **Please make this information readily available until you receive a copy of the final package.**

If you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures
PN Library.dot 8/27/2015

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Notice of Public Comment

January 8, 2016
Cargill, Inc.
089-36416-00203 and 089-36144-00203

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has been placed in the Legal Advertising section of your local newspaper. The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana's Air Permitting Program.

Please Note: *If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.*

Enclosure
PN AAA Cover.dot 8/27/2015

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Michael R. Pence
Governor

Carol S. Comer
Commissioner

AFFECTED STATE NOTIFICATION OF PUBLIC COMMENT PERIOD
DRAFT INDIANA AIR PERMIT

January 8, 2016

A 30-day public comment period has been initiated for:

Permit Number: **089-36416-00203 and 089-36144-00203**
Applicant Name: **Cargill, Inc.**
Location: **Hammond, Lake County, Indiana**

The public notice, draft permit and technical support documents can be accessed via the **IDEM Air Permits Online** site at:
http://www.in.gov/ai/appfiles/idem-caats/

Questions or comments on this draft permit should be directed to the person identified in the public notice by telephone or in writing to:

Indiana Department of Environmental Management
Office of Air Quality, Permits Branch
100 North Senate Avenue
Indianapolis, IN 46204

Questions or comments regarding this email notification or access to this information from the EPA Internet site can be directed to Chris Hammack at chammack@idem.IN.gov or (317) 233-2414.

Affected States Notification.dot 8/27/2015

Mail Code 61-53

IDEM Staff	VHAUN 1/8/2016 Cargill, Inc. 089-36416 and 36144-00203 DRAFT			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**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Michael Golando Cargill, Inc. 1100 Indianapolis Blvd Hammond IN 46320 (Source CAATS)									
2		Samuel Neal Facility Manager Cargill, Inc. 1100 Indianapolis Blvd Hammond IN 46320 *(RO CAATS)*									
3		East Chicago City Council 4525 Indianapolis Blvd East Chicago IN 46312 *(Local Official)*									
4		Lake County Health Department-Gary 1145 W. 5th Ave Gary IN 46402-1795 *(Health Department)*									
5		WJOB / WZVN Radio 6405 Olcott Ave Hammond IN 46320 *(Affected Party)*									
6		Hammond City Council and Mayors Office 5925 Calumet Avenue Hammond IN 46320 *(Local Official)*									
7		Hammond Public Library 564 State St Hammond IN 46320-1532 *(Library)*									
8		Shawn Sobocinski 5950 Old Porter Rd Aprt 306 Portage IN 46368-1558 *(Affected Party)*									
9		Mark Coleman 8 Turret Rd. Portage IN 46368-1072 *(Affected Party)*									
10		Mr. Chris Hernandez Pipefitters Association, Local Union 597 1461 East Summit St Crown Point IN 46307 *(Affected Party)*									
11		Craig Hogarth 7901 West Morris Street Indianapolis IN 46231 *(Affected Party)*									
12		Lake County Commissioners 2293 N. Main St, Building A 3rd Floor Crown Point IN 46307 *(Local Official)*									
13		Anthony Copeland 2006 E. 140th Street East Chicago IN 46312 (Affected Party)									
14		Barbara G. Perez 506 Lilac Street East Chicago IN 46312 *(Affected Party)*									
15		Mr. Robert Garcia 3733 Parrish Avenue East Chicago IN 46312 *(Affected Party)*									

Total number of pieces Listed by Sender 15	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.

FACSIMILIE OF PS Form 3877

Mail Code 61-53

IDEM Staff	VHAUN 1/8/2016 Cargill, Inc. 089-36416 and 36144-00203 DRAFT			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**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Susan Grenzebach ST Environmental, LLC PO Box 2557 Chesterton IN 46034-2557 (Consultant)									
2		Ms. Karen Kroczek 8212 Madison Ave Munster IN 46321-1627 *(Affected Party)*									
3		Joseph Hero 11723 S Oakridge Drive St. John IN 46373 *(Affected Party)*									
4		Gary City Council 401 Broadway # 209 Gary IN 46402 *(Local Official)*									
5		Ron Novak Hammond Dept. of Environmental Management 5925 Calumnet Ave. Hammond IN 46320 *(Local Official)*									
6		Mr. Larry Davis 268 South, 600 West Hebron IN 46341 *(Affected Party)*									
7		Ryan Dave 939 Cornwallis Munster IN 46321 *(Affected Party)*									
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Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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