INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

To:	Interested Parties
Date:	September 26, 2014
From:	Matthew Stuckey, Chief Permits Branch Office of Air Quality
Source Name:	Tate & Lyle Ingredients Americas LLC
Permit Level:	Title V - Significant Source Modification
Permit Number:	157 - 34094 - 00003
Source Location:	2245 North Sagamore Parkway, Lafayette, Indiana
Type of Action Taken:	Modification at an existing source Revisions to permit requirements

Notice of Decision: Approval - Effective Immediately

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

The final decision is available on the IDEM website at: http://www.in.gov/apps/idem/caats/
To view the document, select Search option 3, then enter permit 34094.

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

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

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

(continues on next page)

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

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

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

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

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

Enclosures

IDEM

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Commissioner

September 26, 2014

Mr. Richard Dickinson
Tate & Lyle Ingredients Americas LLC
2200 East Eldorado Street
Decatur, IL 62525

Re: 157-34094-00003
Significant Source Modification

Dear Mr. Dickinson:

Tate & Lyle Ingredients Americas LLC was issued Part 70 Operating Permit Renewal No. T157-27029-00003 on July 03, 2012 for a stationary wet corn milling plant located at 2245 North Sagamore Parkway, Lafayette, IN 47904. An application to modify the source was received on January 21, 2014. 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:

Wet Milling Operations

(a) Two (2) Grit Starch Separator Screens, identified as 15J39 and 15J40, approved in 2014 for construction, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(b) One (1) Gluten Vacuum Filter, identified as 21F5, approved in 2014 for construction, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(c) One (1) Gluten Vacuum Filter Pump, identified as 21C105, approved in 2014 for construction, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(d) Insignificant Activities:

(1) Steepwater Evaporator Vacuum Pump, identified as (14P511), approved in 2014 for construction, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17. (14P511) will serve as a backup to the existing steepwater evaporator vacuum pump (14P510).

(2) Starch storage tank, identified as Dent 1 Starch Storage Tank (15V263), approved in 2014 for construction, and exhausting to stack 452.

Syrup Refining Operations

(a) One (1) Jet Conversion Flash Chamber, identified as 18V513, approved in 2014 for construction, for the production of maltodextrins, with SO_2 and VOC emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17

(b) One (1) Powdered Carbon Transfer Receiver, identified as 18F101, approved in 2014 for construction, to pneumatically transfer carbon from the Powdered Carbon Storage Silo, identified as 9V30, to the precoat vacuum filters. The pneumatic air will exhaust through blower 18C101 to stack 462.

Insignificant Activities:

(a) Precoat Vacuum Filter (S/V 163A), approved in 2014 for construction, identified as 18F57.

(b) Precoat Filter Vacuum Pump (S/V 161A), approved 2014 for construction, identified as 18C57.

(c) One (1) Enzyme Liquefaction Reactor, identified as 18V230, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack460.

(d) One (1) Enzyme Liquefaction Reactor, identified as 18V231, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack461.

Starch Modification Operations

(a) One (1) Propylated Starch Reactor, identified as 45V298, approved in 2014 for construction, with emissions controlled by scrubber 45F212, exhausting to stack 50, and equiped with emergency pressure relief vent, identified as 45V298-PRV, that will exhaust to stack 417.

(b) One (1) Propylated Starch Reactor, identified as 45V299, approved in 2014 for construction, with emissions controlled by scrubber 45F212, exhausting to stack 50, and equiped with emergency pressure relief vent, identified as 45V299-PRV, that will exhaust to stack 418.

(c) One (1) Oxidized Starch Reactor, identified as 18V274, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack 455.

(d) One (1) Flash 4 Slurry Hold Tank, identified as 54V401, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack 419.

(e) One (1) Flash 4 Larox Filter Feed Tank, identified as 54V403, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack 420.

(f) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F421/54V421, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack 421.

(g) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F422/54V422, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack 422.

(h) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F4MM/54V4MM, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack 423.

Insignificant Activities:

(a) One (1) 10,000 gallon sodium bisulfite Storage Tank, Identified as 18V108, approved in 2014 for construction, with emissions uncontrolled and exhausting to stack 456.

(b) One (1) 10,000 gallon sodium chlorite Storage Tank, Identified as 18V109, approved in 2014 for construction, with emissions uncontrolled and exhausting to stack 457.

(c) Roll Dryer Rotary Vacuum Filter (S/V 163B), identified as 18F53, approved in 2014 for construction.

(d) Roll Dryer Rotary Filter Vacuum Pump (S/V 161B), identified as 18C233, approved in 2014 for construction.

(e) One (1) vent fan, identified as 45C298, installed on Propylated Starch Reactor (45V298), approved in 2014 for construction, uncontrolled and utilized after the acid-kill step, and exhausting to stack 417.

(f) One (1) vent fan, identified as 45C299, installed on Propylated Starch Reactor (45V299), approved in 2014 for construction, uncontrolled and utilized after the acid-kill step, and exhausting to stack 418.

Starch Drying and Handling Operations

(a) One (1) Starch Roll Dryer #304, identified as 19D304, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stacks 408A and 408B.

(b) One (1) Starch Roll Dryer #305, identified as 19D305, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stacks 409A and 409B.

(c) #2 Starch Agglomerator, identified as 52D210, approved in 2014 for construction, controlled by four product collection cyclones (52F220 - 52F223) and baghouse 52F230, and exhausting to stack 361. #2 Starch Agglomerator system consists of the following:

(1) One (1) dryer equipped with a direct-fired natural gas low NOx burner, with heat input capacity of 20 MMBtu/hr.

(2) One (1) mechanical fluid bed, identified as 52Y211, aspirated to the inlet of the agglomerator.

(3) One (1) fines recycle system, identified as 52C221, transferring product to the inlet of the agglomerator.

(4) One (1) #5 tote packing system with head hopper, identified as 52V245 and tote packer, identified as 52Z245, aspirated to the agglomerator #2 packer dust collector, identified as 52F225, exhausting via vent 362 to stack 361.

(5) One (1) #7 bag packing system with head hopper, identified as 52V247 and bag packer, identified as 52Z247 aspirated to the agglomerator #2 packer dust collector, identified as 52F225, exhausting via vent 362 to stack 361. General aspiration of the packer #7 bag conveying equipment is by the packer #6 House Dust Collector, identified as 56F602.

(6) One (1) reprocess bag dump, identified as 52V225, aspirated to the agglomerator #2 packer dust collector, identified as 52F225, and exhausting via vent 362 to stack 361. Reprocessed product is also transferred via a blower, identified as 52C224 to the packer dust collector, identified as 52F225, from the bag dump.

(7) Two (2) product storage bins, identified as 52V250 and 52V251, equipped with bin vent filters, identified as 52F250 and 52F251, and exhausting to stacks 401 and 402. Only one of the two product storage bins can receive product from the agglomerator at any time.

(d) #4 Starch Flash Dryer, identified as 54D450, approved in 2014 for construction, controlled by six product collection cyclones, identified as 54F451-54F456, followed by a wet scrubber, identified as 54F460, and exhausting to stack 388, limited to 250 million lb/year of propylated starch. #4 Starch Flash Dryer System consists of the following:

(1) One (1) dryer equiped with a direct-fired natural gas low-NOx burner, with heat input capacity of 32MMBtu/hr.

(2) One (1) Starch Densifier Mill Surge Hopper, identified as 54V470, controlled by bin vent filter, identified as 54F471, and exhausting to stack 389.

(3) One (1) Product Storage Bin #440, identified as 54V440, equipped with bin vent filter, identified as 54F440, and exhausting to stack 385.

(4) One (1) Product Storage Bin #441, identified as 54V441, equipped with bin vent filter, identified as 54F441, and exhausting to stack 386.

(5) One (1) Product Storage Bin #4CC, identified as 54V4CC, equipped with bin vent filter, identified as 54F4CC, and exhausting to stack 387.

(6) One (1) Product Bin #1, identified as 07V50, constructed in 1966 and approved in 2014 for modification, formerly associated with Special Belt Dryer 16D5, with emissions controlled by bin vent 07F73, and exhausting to stack 109.

(7) One (1) Product Bin #2, identified as 07V49, constructed in 1966, and approved in 2014 for modification, formerly associated with Special Belt Dryer 16D5, with emissions controlled by bin vent 07F72, and exhausting to stack 108.

(8) One (1) Product Bin #3, identified as 07V48, constructed in 1966, and approved in 2014 for modification, formerly associated with Special Belt Dryer 16D5, with emissions controlled by bin vent 07F71, and exhausting to stack 107.

Starch Packaging and Loadout

(a) One (1) Bag Packer #6 System, approved in 2014 for construction, consisting of the following:

(1) One (1) Packer #6 Product Receiver, identified as 56F601, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(2) One (1) Packer #6 Head Hopper, identified as 56V600, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(3) One (1) Bag Packer #6, identified as 56Z600, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(4) One (1) Reprocess Bag Dump Transfer Line, identified as 56C630, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(5) One (1) Packer #6 House Dust Collector, identified as 56F602, with emissions from Ultrasonic Sealers and Bag Conveying Systems associated with Packer #6 and Bag Packer Conveying Equipment associated with #2 Starch Agglomerator, controlled by baghouse 56F602, and exhausting via vent 381 to stack 361.

(6) One (1) Reprocess Bag Dump, identified as 56V630 with emissions controlled by baghouse 56F602, and exhausting via vent 381 to stack 361.

Utility Area

(1) One (1) NG-fired boiler, identified as 31B1, constructed in 1984 and modified in 2004 and approved in 2014 for modification, with a heat input capacity of 231 MMBtu/hr, equipped with four (4) low-NO_x burners, using natural gas and exhausting to stack 202.

The following construction conditions are applicable to the proposed modification:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may

affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

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

Effective Date of the Permit

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

Commenced Construction

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

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

Approval to Construct

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

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

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

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

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

If you have any questions on this matter, please contact Ghassan Shalabi 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 Ghassan Shalabi or extension 4-5378 or dial (317) 234-5378.

Sincerely,

for JA

Jenny Acker, Section Chief
Permits Branch
Office of Air Quality

Attachments: Significant Source Modification and Technical Support Document

cc: File - Tippecanoe County
Tippecanoe County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch

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Commissioner

Significant Source Modification to a Part 70 Source

OFFICE OF AIR QUALITY

Tate & Lyle Ingredients Americas LLC
2245 North Sagamore Parkway
Lafayette, Indiana 47904

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

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

Significant Source Modification No.: 157-34094-00003	
Issued by: for JA Jenny Acker, Section Chief, Permits Branch Office of Air Quality	Issuance Date: September 26, 2014

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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 plant.

Source Address:	2245 North Sagamore Parkway, Lafayette, IN 47904
General Source Phone Number:	(765) 448-7123
SIC Code:	2046
County Location:	Tippecanoe
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Rules Major Source, under Section 112 of the Clean Air Act Nested Source with fossil fuel fired boilers totaling more than two hundred fifty million (250,000,000) British thermal units per hour heat input, as 1 of 28 Source Categories, within a non-listed source

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

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

(a) Corn Receiving and Handling Operations, consisting of:

(1) One (1) Railcar Corn Dump Hopper, identified as 12V101, constructed in 1966, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(2) One (1) Truck Corn Dump Hopper, identified as 12V102, constructed in 1966, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(3) One (1) Corn Transfer Conveyor, identified as 8U1, constructed in 2007, permitted in 2011, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(4) One (1) Bucket Corn Elevator, identified as 12U2, constructed in 2006, permitted in 2011, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(5) Two (2) Corn Transfer Conveyors, identified as 12U4 and 12U5, constructed in 2007, permitted in 2011, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(6) Five (5) Corn Storage Silos, identified as 13V1, 13V2, 13V3, 13V4 and 13V5, constructed in 1966, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(7) Three (3) Corn Transfer Conveyors, identified as 13U6, 13U7, and 13U8, constructed in 2007, permitted in 2011, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(8) One (1) Corn Cleaner Fill Conveyor, identified as 14U12, constructed in 2007, permitted in 2011, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(9) One (1) Vibrating Corn Cleaning System, identified as 14J5, constructed in 2007, permitted in 2011, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(10) One (1) Corn Cleanings Pneumatic Transfer, identified as 14C300, constructed in 2007, permitted in 2011, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(11) One (1) Bucket Elevator from Corn Cleaner to Steeps, identified as 14U9, constructed in 1966, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(b) Wet Milling Operations, consisting of:

(1) Twelve (12) Corn Steep Tanks, identified as 14V3 through 14V14, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(2) Two (2) Corn Steep Tanks, identified as 14V15 and 14V16, constructed in 1990, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(3) Three (3) Corn Steep Tanks, identified as 14V400, 14V401, and 14V402, constructed in 2006, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(4) One (1) High DS Starch Filter, identified as 18F510, constructed in 1995, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(5) One (1) Third Stage Germ Wash Screen, identified as 15J203, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(6) One (1) Light Steepwater Receiver Tank, identified as 14V19, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(7) One (1) High DS Starch Tank, identified as 18V520, constructed in 1995, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(8) One (1) High DS Starch Wash Water Tank, identified as 18V522, constructed in 1995, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(9) Seven (7) Grit Starch Separator (Third Grind) Screens, identified as 15J15 through 15J19, 15J21, and 15J22, constructed in 1990, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(10) Two (2) Grit Starch Separator Screens, identified as 15J39 and 15J40, approved in 2014 for construction, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(11) Six (6) Sixth Stage Fiber Wash Screens, identified as 15J86, 15J87, 15J88, 15J89, 15J220, and 15J221, constructed in 1966, emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(12) Two (2) First Stage Germ Wash Screens, identified as 15J100 and 15J101, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(13) One (1) Second Stage Germ Wash Screen, identified as 15J99, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(14) One (1) Second Pass Germ Feed Tank, identified as 15V25, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(15) One (1) Grit Starch Feed Tank, identified as 15V26, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(16) One (1) Fiber Supply Tank, identified as 21V33, constructed in 2000, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(17) One (1) Steeped Corn Separator, identified as 15J5A, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(18) One (1) First Pass Germ Feed Tank, identified as 15V23, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(19) One (1) Second Stage Germ Wash Screen, identified as 15J53, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(20) Two (2) Second Grind Dewatering Screens, identified as 15J14 and 15J3, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(21) One (1) First Grind Receiver Tank, identified as 15V22, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(22) One (1) Second Grind Receiver Tank, identified as 15V24, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(23) One (1) Third Grind Discharge Tank, identified as 15V27, constructed in 1995, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(24) One (1) Clamshell Wash Water Tank, identified as 15V2, constructed in 1991, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(25) One (1) Steeped Corn Pump Tank, identified as 14V17, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(26) One (1) Germ Water Tank, identified as 15V139, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(27) One (1) Steepwater Head Tank, identified as 14V18, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(28) One (1) Steep Acid Tank, identified as 14V20, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(29) Five (5) Fiber Wash Receiver Tanks, identified as 15V110 through 15V114, constructed in 1966, providing aspiration to 1st through 5th Stage Fiber Wash Screens, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(30) One (1) Process Water Tank, identified as 15V30, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(31) One (1) Primary Wash Water Tank, identified as 15V41, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(32) One (1) Wash Water Surge Tank, identified as 15V38, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(33) One (1) Primary Feed Tank, identified as 15V34, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(34) One (1) Primary Underflow Tank, identified as 15V35, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(35) One (1) Gluten Thickener Feed Tank, identified as 15V36, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(36) One (1) Heavy Gluten Tank, identified as 15V37, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(37) One (1) Clarifier Feed Tank, identified as 15V40, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(38) One (1) MST Feed Tank, identified as 15V31, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(39) One (1) Gluten Vacuum Filter, identified as 21F5, approved in 2014 for construction, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(40) One (1) Gluten Vacuum Filter Pump, identified as 21C105, approved in 2014 for construction, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(41) One (1) Gluten Vacuum Filter, identified as 21F6, constructed in 2006, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(42) One (1) Gluten Vacuum Filter Pump, identified as 21C6, constructed in 2006, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(43) One (1) Gluten Vacuum Filter, identified as 21F7, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(44) One (1) Gluten Vacuum Filter Pump, identified as 21C7, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(45) One (1) Gluten Vacuum Filter, identified as 21F8, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(46) One (1) Gluten Vacuum Filter Pump, identified as 21C8, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(47) One (1) Gluten Vacuum Filter, identified as 21F9, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(48) One (1) Gluten Vacuum Filter Pump, identified as 21C9, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(49) One (1) Gluten Vacuum Filter, identified as 21F10, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(50) One (1) Gluten Vacuum Filter Pump, identified as 21C10, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(51) One (1) Fiber Dewatering Screen, identified as 21F100, constructed in 1990, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(52) One (1) Fiber Dewatering Screen, identified as 21F101, constructed in 1990, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(53) One (1) Gluten Filter Bowl Drain Tank, identified as 21V159, constructed in 1990, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(54) One (1) Gluten Filter Wash Bar Trough Drain Tank, identified as 21V59, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(55) One (1) Fiber Filtrate Tank, identified as 21V58, constructed in 1990, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(56) One (1) Heavy Steepwater Tank, identified as 21V56, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(57) One (1) Monitor Tank, identified as 15V210, constructed in 1990, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(c) Feed/Meal/Germ Production Operations, consisting of:

(1) One (1) Fiber Flash Dryer, identified as 21D501, constructed in 2007. PM and PM_{10} emissions are controlled by integral product collectors/cyclones 21F501-21F502, then PM, PM_{10} and sulfur dioxide emissions are controlled by scrubber 21F13, then VOC emissions are controlled by Thermal Oxidation Units 48F201 and 48F202, before exhausting to stack 17.

(2) One (1) natural gas or biogas fired Fiber Flash Dryer Furnace, identified as 21B501, constructed in 2007, with a heat input capacity of 60 MMBtu/hr, with emissions uncontrolled, and exhausting to stack 17. This emissions unit is part of Fiber Flash Dryer 21D501 for the purposes of NSPS, 40 CFR 60, Subpart Dc. Under 40 CFR 60, Subpart Dc, this is considered an affected source. [40 CFR 60, Subpart Dc]

(3) Two (2) Natural Gas Fired Thermal Oxidation Units, identified as 48F201 and 48F202, constructed in 2006, with a heat input capacity of 5 million Btu per hour, each.

(4) One (1) Corn Cleanings Receiver, identified as 21F304, loaded pneumatically via Corn Cleanings Pneumatic Transfer, identified as 08C304, constructed in 2007, with emissions controlled by scrubber 21F311, exhausting as combustion air into the furnace of Gluten Flash Dryer 48D101 and/or the Fiber Flash Dryer Furnace 21B501 and/or with PM and PM_{10} emissions controlled by Thermal Oxidation Units 48F201 and 48F202; before exhausting to stack 17.

(5) One (1) RST Feed Dryer, identified as 21D301, constructed in 2006. PM and PM_{10} emissions are controlled by product collector/cyclone 21F301, then PM, PM_{10} and sulfur dioxide emissions are controlled by scrubber 21F13, then VOC emissions are controlled by Thermal Oxidation Units 48F201 and 48F202, before exhausting to stack 17.

(6) One (1) natural gas or biogas fired Gluten Flash Dryer, identified as 48D101, constructed in 2007, with a heat input capacity of 30 MMBtu/hr. PM and PM_{10} emissions are controlled by integral product collectors/cyclones 48F101-48F102, then PM, PM_{10} and sulfur dioxide emissions are controlled by scrubber 21F13, then VOC emissions are controlled by Thermal Oxidation Units 48F201 and 48F202, before exhausting to stack 17.

(7) One (1) 48D101 Dryer Air Conveying Line, identified as AC8, constructed in 1966, with emissions controlled by integral product collector/baghouse 21F36, and exhausting to stack 145.

(8) One (1) RST Germ Dryer, identified as 21D401, constructed in 2006. PM and PM_{10} emissions are controlled by product collector/cyclone 21F401, then PM, PM_{10} and sulfur dioxide emissions are controlled by scrubber 21F13, then VOC emissions are controlled by Thermal Oxidation Units 48F201 and 48F202, before exhausting to stack 17.

(9) Two (2) Water Tube Germ Cooler Rotary Airlock Valves, identified as 21D3 (formerly Germ Dryer 21D3), loaded pneumatically via Germ Pneumatic Transfer 21C404 and Germ Cooler Cyclone 21F404, constructed in 2007, with pneumatic transfer blowback air controlled by an alkaline scrubber 15F401, and exhausting to stack 17 (see Section D.2 for the control device monitoring requirements).

(10) One (1) Feed Cooler, identified as 21D8 (formerly Meal Dryer 21D8), constructed in 1966 and modified in 2007. PM and PM_{10} emissions are controlled by product collector/cyclone 21F310, then PM and PM_{10} emissions controlled by scrubber 21F311, exhausting as combustion air into the furnace of Gluten Flash Dryer 48D101 and/or the Fiber Flash Dryer Furnace 21B501, and/or with PM and PM_{10} emissions controlled by Thermal Oxidation Units 48F201 and 48F202, before exhausting to stack 17.

(11) One (1) Feed Mill, identified as 21G351, constructed in 2007, with emissions controlled by scrubber 21F312, and exhausting to stack 444.

(12) One (1) Feed Mill, identified as 21G352, constructed in 2007, with emissions controlled by scrubber 21F312, and exhausting to stack 444.

(13) One (1) Feed Milling Loadout Conveyor, identified as 21U314, constructed in 2007, with emissions controlled by scrubber 21F312, and exhausting to stack 444.

(14) One (1) Feed Loadout Hopper, identified as 21V125, permitted in 2005, with emissions aspirated to the inlet of Feed Cooler 21D8 to be used as cooling air.

(15) One (1) Feed Storage Bin, identified as 8V121, constructed in 1966, loaded pneumatically, with emissions controlled by bin vent 8F1, and exhausting to stack 110.

(16) One (1) Feed Storage Bin, identified as 8V122, constructed in 1966, loaded pneumatically, with emissions controlled by bin vent 8F2, and exhausting to stack 111.

(17) One (1) Feed Storage Bin, identified as 8V123, constructed in 1966, loaded pneumatically, with emissions controlled by bin vent 8F3, and exhausting to stack 112.

(18) One (1) Feed Storage Bin, identified as 8V124, constructed in 1966, loaded pneumatically, with emissions controlled by bin vent 8F4, and exhausting to stack 113.

(19) One (1) Meal Storage Bin, identified as 8V62, loaded pneumatically via Gluten Meal Pneumatic Transfer, identified as 21C15, constructed in 1966, with emissions controlled by bin vent 8F62, and exhausting to stack 114.

(20) One (1) Meal Storage Bin, identified as 8V63, loaded pneumatically via Gluten Meal Pneumatic Transfer, identified as 21C15, constructed in 1966, with emissions controlled by bin vent 8F63, and exhausting to stack 115.

(21) One (1) Germ Storage Bin, identified as 8V53, loaded pneumatically via Germ Pneumatic Transfer, identified as 21C404, constructed in 1966, with emissions controlled by bin vent 8F53, and exhausting to stack 116.

(22) One (1) Germ Storage Bin, identified as 8V54, loaded pneumatically via Germ Pneumatic Transfer, identified as 21C404, constructed in 1966, with emissions controlled by bin vent 8F54, and exhausting to stack 117.

(23) Two (2) Co-Product Loadout Conveyors, identified as 8U39 and 8U41, constructed in 1966, with emissions aspirated to Meal Storage Bin 8V62, and controlled by bin vent 8F62, and exhausting to stack 114.

(24) Two (2) Air Conveying Lines to Loadout, identified as AC23 and AC24, constructed in 1966, with emissions controlled by integral product receiver/baghouse 12F39, and exhausting to stack 125.

(25) One (1) Rail Loadout Conveyor, identified as 12U11, constructed in 1991, with emissions controlled by baghouse 12F40, and exhausting to stack 3.

(d) Syrup Refining Operations, consisting of:

(1) One (1) HCl Storage Tank (Concentrated), identified as 9V101, constructed in 1995, with emissions controlled by scrubber 9F102, and exhausting to stack 156.

(2) One (1) Acid Reject Flash Chamber, identified as 18V312, constructed in 1966, with emissions uncontrolled, and exhausting to stack 320.

(3) One (1) Jet Conversion Flash Chamber, identified as 18V413, constructed in 1966 and approved in 2011 for the production of OS starches, with SO_2 and VOC emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17 (see Section D.2 for the control device monitoring requirements).

(4) One (1) Jet Conversion Flash Chamber, identified as 18V513, approved in 2014 for construction, for the production of maltodextrins, with SO_2 and VOC emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(5) One (1) Soda Ash Storage Tank, identified as 9V144, loaded pneumatically via Soda Ash Unloading System, identified as 9C40, constructed in 1966, with emissions controlled by eductor/scrubber 9E1, and exhausting to stack 149.

(6) One (1) Filteraid Storage Silo, identified as 9V31, loaded pneumatically via Filteraid Unloading System, identified as 9C31, constructed in 1966, with emissions controlled by bin vent 9F31, and exhausting to stack 123.

(7) One (1) Filteraid Conveying System to Precoat Makeup Tank, identified as 18C18, constructed in 1966, with emissions controlled by integral product receiver/baghouse 18F118, and exhausting to stack 129.

(8) One (1) Powdered Carbon Storage Silo, identified as 9V30, loaded pneumatically via Powdered Carbon Unloading System, identified as 9C30, constructed in 1966, with emissions controlled by bin vent filter 09F30, and exhausting to stack 124.

(9) One (1) Powdered Carbon Transfer Receiver, identified as 18F101, approved in 2014 for construction, to pneumatically transfer carbon from the Powdered Carbon Storage Silo, identified as 9V30, to the precoat vacuum filters. The pneumatic air will exhaust through blower 18C101 to stack 462.

(e) Starch Modification Operations, consisting of:

(1) One (1) Non-PO Reactor/Oxidized Starch Reactor, identified as 45V115, constructed in 1966 and approved in 2010 for modification, with emissions uncontrolled, and exhausting to stack 11.

(2) One (1) Non-PO Reactor/Oxidized Starch Reactor, identified as 45V116, constructed in 1966 and approved in 2010 for modification, with emissions uncontrolled, and exhausting to stack 12.

(3) One (1) Non-PO Reactor/Oxidized Starch Reactor, identified as 45V222, constructed in 1973 and approved in 2010 for modification, with emissions uncontrolled, and exhausting to stack 31.

(4) One (1) PO Reactor, identified as 45V223, constructed in 1973, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(5) One (1) PO Reactor, identified as 45V240, constructed in 1986, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(6) One (1) PO Reactor, identified as 45V241, constructed in 1986, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(7) One (1) PO Reactor, identified as 45V242, constructed in 1986, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(8) One (1) PO Reactor, identified as 45V243, constructed in 1986, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(9) One (1) PO Reactor, identified as 45V246, constructed in 1988, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(10) One (1) PO Reactor, identified as 45V247, constructed in 1988, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(11) One (1) PO Reactor, identified as 45V248, constructed in 1991, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(12) One (1) PO Reactor, identified as 45V270, constructed in 1995, with emissions controlled by scrubber 45F212, exhausting to stack 50.

(13) One (1) PO Reactor, identified as 45V271, constructed in 1995, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(14) One (1) PO Reactor, identified as 45V280, constructed in 2002, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(15) One (1) PO Reactor, identified as 45V281, constructed in 2002, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(16) Five (5) Propylated Starch Reactors, identified as 45V292, 45V293, 45V294, 45V295, and 45V296, constructed in 2007, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(17) One (1) Propylated Starch Reactor, identified as 45V298, approved in 2014 for construction, with emissions controlled by scrubber 45F212, exhausting to stack 50, and equiped with emergency pressure relief vent, identified as 45V298-PRV, that will exhaust to stack 417.

(18) One (1) Propylated Starch Reactor, identified as 45V299, approved in 2014 for construction, with emissions controlled by scrubber 45F212, exhausting to stack

50, and equiped with emergency pressure relief vent, identified as 45V299-PRV, that will exhaust to stack 417.

(19) One (1) Oxidized Starch Reactor, identified as 18V173, constructed in 1994 and approved in 2009 for modification and approved in 2010 for modification, with emissions uncontrolled, and exhausting to stack 41.

(20) One (1) Oxidized Starch Reactor, identified as 18V178, constructed in 1994 and approved in 2009 for modification and approved in 2010 for modification, with emissions uncontrolled, and exhausting to stack 43.

(21) One (1) Oxidized Starch Reactor, identified as 18V274, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack 455.

(22) One (1) Oxidized Starch Reactor, identified as 18V174, constructed in 1994 and approved in 2010 for modification, with emissions uncontrolled, and exhausting to stack 41.

(23) One (1) Oxidized Starch Reactor, identified as 18V175, constructed in 1994 and approved in 2010 for modification, with emissions uncontrolled, and exhausting to stack 43.

(24) One (1) Tri-Polyphosphate Storage Bin, identified as 9V103, constructed in 1988, with emissions controlled by bin vent 9F103, and exhausting to stack 68.

(25) One (1) Sodium Sulfate Storage Bin, identified as 45V250, loaded pneumatically via Sodium Sulfate Unloading System, identified as 09C200 and 09F200, constructed in 1985, with emissions controlled by two bin vents, 45F25 and 45F25A, and exhausting to stack 64.

(26) One (1) Flash 1 Filtrate Reineveldt Centrifuge, identified as 40Y1, constructed in 1985, with emissions uncontrolled, and exhausting to stack 315.

(27) One (1) Flash 1 Slurry Hold Tank, identified as 40V1, constructed in 1985, with emissions uncontrolled, and exhausting to stack 315.

(28) One (1) Flash 1 Starch Hold Tank, identified as 40V50, constructed in 1996, with emissions uncontrolled, and exhausting to stack 289.

(29) One (1) Dryer Starch Feed Conveyor/Flash 1 Paddle Mixer, identified as 40U2, constructed in 1985, with emissions uncontrolled, and exhausting to stack 315.

(30) Two (2) Flash 2 Slurry Hold Tanks, identified as 40V20 and 40V21, constructed in 1990, with emissions uncontrolled, and exhausting to stack 80.

(31) Three (3) Flash 2 Larox Filters, identified as 40F51, 40F52, and 40F53, constructed in 1995, with emissions uncontrolled, and exhausting to stack 249.

(32) One (1) Flash 2 Larox Filter, identified as 40F54, constructed in 2002, with emissions uncontrolled, and exhausting to stack 249.

(33) One (1) Flash 2 Air Release Tank, identified as 40V15, constructed in 1995, with emissions uncontrolled, and exhausting to stack 250.

(34) One (1) Flash 2 Air Release Tank, identified as 40V16, constructed in 2002, with emissions uncontrolled, exhausting to stack 251.

(35) One (1) Dryer Starch Feed Conveyor/Flash 2 Paddle Mixer, identified as 40U23, constructed in 1995, with emissions uncontrolled, exhausting to stack 249.

(36) Two (2) Flash 3 Slurry Hold Tanks, identified as 43V71 and 43V72, constructed in 1995, with emissions uncontrolled, and exhausting to stack 273.

(37) Three (3) Flash 3 Larox Filters, identified as 43F71, 43F72, and 43F73, constructed in 1995, with emissions uncontrolled, and exhausting to stack 260.

(38) One (1) Flash 3 Larox Air Release Tank, identified as 43V85, constructed in 1995, with emissions uncontrolled, and exhausting to stack 261.

(39) One (1) Flash 3 Larox Air Release Tank, identified as 43V86, constructed in 1995, with emissions uncontrolled, and exhausting to stack 318.

(40) One (1) Flash 4 Slurry Hold Tank, identified as 54V401, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, and exhausting to stack 419.

(41) One (1) Flash 4 Larox Filter Feed Tank, identified as 54V403, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, and exhausting to stack 420.

(42) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F421/54V421, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, and exhausting to stack 421.

(43) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F422/54V422, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, and exhausting to stack 422.

(44) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F4MM/54V4MM, approved in 2014 for construction with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, and exhausting to stack 423.

(45) Two (2) Spray Dryer 1 Feed Tanks, identified as 30V1 and 30V2, constructed in 1986, with emissions uncontrolled, and exhausting to stack 195.

(46) Three (3) Spray Dryer 1 Process Tanks, identified as 40V11, 40V12, and 40V14, constructed in 1988, with emissions uncontrolled, and exhausting to stack 222.

(47) One (1) Spray Dryer 2 Feed Tank, identified as 46V297, constructed in 2006, with emissions uncontrolled, and exhausting to stack 434.

(48) One (1) Spray Dryer 2 Sweco Tank, identified as 46V201, constructed in 2006, with emissions uncontrolled, and exhausting to stack 436.

(49) One (1) Spray Dryer 2 Waste Surge Tank, identified as 46V213, constructed in 2006, with emissions uncontrolled, and exhausting to stack 424.

(50) One (1) Spray Dryer 2 Under Flow Tank, identified as 46V204, constructed in 2006, with emissions uncontrolled, and exhausting to stack 435.

(51) Four (4) Belt Dryer Feed Tanks, identified as 45V117 through 45V120, constructed in 1966, with emissions uncontrolled, and exhausting to stack 180.

(f) Starch Reaction Operations, consisting of:

(1) One (1) Starch Feed Bin, identified as 33V1, constructed in 1995, with emissions controlled by bin vent 33F1, and exhausting via vent 236 to stack 355.

(2) One (1) Starch Feed Bin, identified as 33V2, constructed in 1995, with emissions controlled by bin vent 33F2, and exhausting via vent 237 to stack 355.

(3) One (1) Catalyst Bin, identified as 33V5, constructed in 1995, with emissions controlled by bin vent 33F5, and exhausting to stack 239.

(4) One (1) Low Pressure Dry Starch Reactor, identified as 33R1, constructed in 1995, with emissions controlled by baghouses 33F101 and 33F102, and exhausting to stack 238.

(5) One (1) High Pressure Dry Starch Reactor, identified as 33R2, constructed in 1995, with emissions controlled by baghouses 33F201 and 33F202, and exhausting to stack 240.

(6) One (1) Reactor Surge Bin, identified as 50V61, loaded pneumatically via Pneumatic Conveyor, identified as 33C8, constructed in 1997, with emissions controlled by bin vent 50F161, and exhausting via vent 241 to stack 361.

(7) One (1) Reactor Surge Bin, identified as 50V62, loaded pneumatically via Pneumatic Conveyor, identified as 33C4, constructed in 1997, with emissions controlled by bin vent 50F162, and exhausting via vent 242 to stack 361.

(8) One (1) Dry Starch Product Screening Receiver, identified as 50F45, constructed in 1995, with emissions controlled by integral product receiver/baghouse 50F45, and exhausting via vent 262 to stack 355.

(9) One (1) Dry Starch Product Screening Receiver, identified as 50F48, constructed in 1997, with emissions controlled by integral product receiver/baghouse 50F48, and exhausting via vent 243 to stack 355.

(10) One (1) Reactor 2 Mill, identified as 50G1, constructed in 1995, permitted in 2011, with emissions controlled by baghouse 50F48, and exhausting via vent 243 to stack 355.

(11) One (1) Dry Starch Blend Bin, identified as 33V42, loaded pneumatically via Pneumatic Conveyors, identified as 50C47 and 50C46, constructed in 1995, with emissions controlled by bin vent 33F42, and exhausting via vent 244 to stack 355.

(12) One (1) Dry Starch Blend Bin, identified as 33V43, loaded pneumatically via Pneumatic Conveyors, identified as 50C47 and 50C46, constructed in 1995, with emissions controlled by bin vent 33F43, and exhausting via vent 245 to stack 355.

(13) One (1) Dry Starch Blend Bin, identified as 33V40, loaded pneumatically via Pneumatic Conveyors, identified as 50C47 and Blower 33C65, constructed in 1995, with emissions controlled by bin vent 33F40, and exhausting via vent 246 to stack 355.

(14) One (1) Dry Starch Blend Bin, identified as 33V41, loaded pneumatically via Pneumatic Conveyors, identified as 50C47 and Blower 33C65, constructed in 1995, with emissions controlled by bin vent 33F41, and exhausting via vent 247 to stack 355.

(15) One (1) Additives Mill, identified as 50G2, constructed in 1995, permitted in 2011, with emissions aspirated to the intakes of Bins 33V42, 33V43, 33V40, and 33V41.

(g) Starch Drying and Handling Operations, consisting of:

(1) One (1) Adipic Acid Storage Bin, identified as 43V90, loaded pneumatically via truck unloading, constructed in 1996, with emissions controlled by bin vent 43F90, and exhausting to stack 274.

(2) One (1) Starch Flash Dryer #1, identified as 40D1, constructed in 1986, with a heat input capacity of 14.4 MMBtu/hr, with emissions controlled by integral product collector/cyclones 40F1 and 40F2 and scrubber 40F3, and exhausting to stack 69.

(3) One (1) Pneumatic Product Transfer, identified as 40F7, constructed in 1986, with emissions controlled by integral product receiver/baghouse 40F7, and exhausting to stack 70.

(4) One (1) Pneumatic Conveying to Mill Feed Receiver, identified as 25F1, constructed in 1968, with emissions controlled by integral product receiver/baghouse 25F1, and exhausting to stack 147.

(5) One (1) Belt Dryer Mill, identified as 25G1, constructed in 1968, with emissions controlled by integral product receiver/baghouse 25F2, and exhausting to stack 146.

(6) One (1) Starch Storage Bin #8, identified as 7V8, loaded pneumatically via Pneumatic Conveyors, identified as 40C5 and 25C1, constructed in 1986, with emissions controlled by integral product receiver/bin vent 7F8, and exhausting to stack 71.

(7) One (1) Starch Storage Bin #9, identified as 7V9, loaded pneumatically via Pneumatic Conveyors, identified as 40C5 and 25C1, constructed in 1986, with emissions controlled by integral product receiver/bin vent 7F9, and exhausting to stack 72.

(8) One (1) Starch Flash Dryer #2, identified as 40D20, constructed in 1990 and modified in 1991, with a heat input capacity of 40 MMBtu/hr, with emissions controlled by integral product collector/cyclones 40F20 through 40F25 and scrubber 40F26, and exhausting to stack 73.

(9) One (1) Grinder Feed Collector, identified as 40F27, constructed in 1990, and exhausting to the intake of bins 7V20, 7V21, 7V22 and 7V23.

(10) One (1) Starch Grinder/Mill #1, identified as 40G20, constructed in 1990, with emissions controlled by integral product receiver/baghouse 40F28, and exhausting via vent 286 to stack 360.

(11) One (1) Starch Grinder/Mill #2, identified as 40G21, constructed in 1990, with emissions controlled by integral product receiver/baghouse 40F29, and exhausting via vent 287 to stack 360.

(12) One (1) Starch Product Bin #20, identified as 7V20, loaded pneumatically via Pneumatic Conveyor, identified as 40C31, constructed in 1992, with emissions controlled by bin vent 7F20, and exhausting to stack 76.

(13) One (1) Starch Product Bin #21, identified as 7V21, loaded pneumatically via Pneumatic Conveyor, identified as 40C31, constructed in 1992, with emissions controlled by bin vent 7F21, and exhausting to stack 77.

(14) One (1) Starch Product Bin #22, identified as 7V22, loaded pneumatically via Pneumatic Conveyor, identified as 40C31, constructed in 1992, with emissions controlled by bin vent 7F22, and exhausting to stack 78.

(15) One (1) Starch Bin #33, identified as 7V23, loaded pneumatically via Pneumatic Conveyor, identified as 40C31, constructed in 1995, with emissions controlled by bin vent 7F33, and exhausting to stack 267.

(16) One (1) Starch Flash Dryer #3, identified as 43D71, constructed in 1995, with a heat input capacity of 40 MMBtu/hr, with emissions controlled by integral product collector/cyclones 43F81 through 43F86 and scrubber 43F80, and exhausting to stack 265.

(17) One (1) Flash #3 Mill, identified as 40G88, constructed in 1996, with emissions controlled by integral product receiver/baghouse 40F88, and exhausting to stack 266.

(18) One (1) Starch Bin #34, identified as 7V34, loaded pneumatically via Pneumatic Conveyor, identified as 43C75, constructed in 1995, with emissions controlled by bin vent 7F34, and exhausting to stack 268.

(19) One (1) Starch Bin #35, identified as 7V35, loaded pneumatically via Pneumatic Conveyor, identified as 43C75, constructed in 1995, with emissions controlled by bin vent 7F35, and exhausting to stack 269.

(20) One (1) Starch Blend Bin #91, identified as 7V91, loaded pneumatically via Pneumatic Conveyor, identified as 43C75, constructed in 1999, with emissions controlled by bin vent 7F91, and exhausting to stack 345.

(21) One (1) Starch Blend Bin #92, identified as 7V92, loaded pneumatically via Pneumatic Conveyor, identified as 43C75, constructed in 1999, with emissions controlled by bin vent 7F92, and exhausting to stack 346.

(22) One (1) Starch Roll Dryer #1, identified as 41D1, constructed in 1986, with emissions uncontrolled, and exhausting to stack 91.

(23) One (1) Starch Roll Dryer #2, identified as 41D2, constructed in 1986, with emissions uncontrolled, and exhausting to stack 92.

(24) One (1) Starch Roll Dryer #3, identified as 41D3, constructed in 1986, with emissions uncontrolled, and exhausting to stack 93.

(25) One (1) Starch Roll Dryer #4, identified as 41D4, constructed in 1993, with emissions uncontrolled, and exhausting to stack 94.

(26) One (1) Starch Roll Dryer #5, identified as 41D5, constructed in 1995, with emissions uncontrolled, and exhausting to stack 232.

(27) One (1) Starch Roll Dryer #6, identified as 41D6, constructed in 1995, with emissions uncontrolled, and exhausting to stack 233.

(28) One (1) Starch Roll Dryer #7, identified as 41D7, constructed in 1997, with emissions uncontrolled, and exhausting to stack 234.

(29) One (1) Starch Roll Dryer #8, identified as 41D8, constructed in 2000, with emissions uncontrolled, and exhausting to stack 235.

(30) One (1) Pneumatic Product Transfer Roll Dryer, identified as 41F200, constructed in 1986, with emissions controlled by product receiver/baghouse 41F200, and exhausting to the intake of mill 41G200.

(31) One (1) Roll Dryer Mill, identified as 41G200, constructed in 1986, with emissions controlled by integral product receiver/baghouse 41F210, and exhausting via vent 96 to stack 355.

(32) One (1) Pneumatic Product Transfer Roll Dryer, identified as 41F201, constructed in 1993, with emissions controlled by product receiver/baghouse 41F201, and exhausting to the intake of mill 41G201.

(33) One(1) Roll Dryer Mill, identified as 41G201, constructed in 1993, with emissions controlled by integral product receiver/baghouse 41F211, and exhausting via vent 100 to stack 355.

(34) One (1) Product Bin #10, identified as 41V10, loaded pneumatically via Pneumatic Conveyor, identified as 41C220, constructed in 1993, with emissions controlled by bin vent 41F10, and exhausting to stack 97.

(35) One (1) Product Bin #11, identified as 41V11, loaded pneumatically via Pneumatic Conveyor, identified as 41C220, constructed in 1993, with emissions controlled by bin vent 41F11, and exhausting to stack 98.

(36) One (1) Bulk Bag Dump Station, identified as 41F13, constructed in 2000, with emissions controlled by bin vent 41F13, and exhausting indoors to stack 344.

(37) One (1) 41 Building House Vacuum System, identified as 41F133, constructed in 2012, with emissions controlled by baghouse 41F133, and exhausting to stack 445.

(38) One (1) Spray Dryer #1, identified as 30D1, constructed in 1984, with a heat input capacity of 24 MMBtu/hr, with emissions controlled by integral product collector/cyclones 30F7 and 30F8 and product receivers/baghouses 30F2 and 30F3, and exhausting to stack 82.

(39) One (1) Product Transfer to Bins #14 and #15, identified as 41C145, constructed in 1987 and approved for modification in 2013, with emissions controlled by

intermediate product collector/baghouse 30F133 using blower 30C133, exhausting to the product transfer system and integral product collector/baghouses 41F14 and 41F15, respectively, and exhausting via vent 85 to stack 355.

(40) One (1) Product Bin #14, identified as 41V14, constructed in 1987, with emissions controlled by bin vent 41F16, and exhausting to stack 87.

(41) One (1) Product Bin #15, identified as 41V15, constructed in 1987, with emissions controlled by bin vent 41F17, and exhausting to stack 88.

(42) One (1) Regular Starch Belt Dryer D4, identified as 16D4, constructed in 1966, with emissions controlled by the rotoclone scrubbers 16F26 and 17F78, and exhausting to stack 177.

(43) One (1) Belts Product Conveying Mill Product to Bins #4, and #5, identified as 7F25, constructed in 1966, with emissions controlled by integral product collector/baghouse 7F25, and exhausting to stack 103.

(44) One (1) Product Bin #4, identified as 7V47, constructed in 1966, with emissions controlled by bin vent 7F70, and exhausting to stack 106.

(45) One (1) Product Bin #5, identified as 7V46, constructed in 1966, with emissions controlled by bin vent 7F69, and exhausting to stack 105.

(46) One (1) Spray Agglomeration System, identified as 50D101, constructed in 2001, with a heat input capacity of 6.2 MMBtu/hr, with emissions controlled by integral product collector/cyclones 50F111 and 50F112; and product receiver/baghouse 50F102, and exhausting via vent 349 to stack 361.

(47) One (1) Bulk Bag Feed #1 Dump Station, identified as 50V111, constructed in 2001, permitted in 2011, with emissions controlled by baghouse 50F106, and exhausting to stack 350.

(48) One (1) Bulk Bag Feed #2 Dump Station, identified as 50V112, constructed in 2001, permitted in 2011, with emissions controlled by baghouse 50F106, and exhausting to stack 350.

(49) One (1) Agglomeration Blender Receiver/Baghouse, identified as 50F106, loaded pneumatically via Pneumatic Conveyor, identified as Feed Blower 50C107, constructed in 2001, with emissions controlled by integral product collector/baghouse 50F106, and exhausting via vent 350 to stack 361.

(50) One (1) Natural Gas Fired Spray Dryer #2, identified as 46D200, constructed in 2006, with a heat input capacity of 25 million Btu per hour, with PM and PM_{10} emissions controlled by integral cyclones 46F221 through 46F224 and baghouses 46F231 through 46F232, and exhausting via vent 360 to stack 360. Nitrogen oxide (NO_x) emissions are controlled by low-NO_x burners rated at 0.04 lb/MMBtu.

(51) One (1) Product Transfer to Milling, identified as 30F13, constructed in 1987, with emissions controlled by integral product receiver/baghouse 30F13, and exhausting to the intakes of bins 41V45, 41V46, 41V47, and 33V44.

(52) One (1) Dryer Mill, identified as 30G1, constructed in 1987, with emissions controlled by integral product receiver/baghouse 30F15, and exhausting via vent

84 to stack 360.

(53) One (1) Product Bin #45, identified as 41V45, loaded pneumatically via Product Transfer to Milling, identified as 30F13, constructed in 2006, with emissions controlled by bin vent 41F45, and exhausting to stack 226.

(54) One (1) Product Bin #46, identified as 41V46, loaded pneumatically via Product Transfer to Milling, identified as 30F13, constructed in 2006, with emissions controlled by bin vent 41F46, and exhausting to stack 255.

(55) One (1) Product Bin #47, identified as 41V47, loaded pneumatically via Product Transfer to Milling, identified as 30F13, constructed in 2006, with emissions controlled by bin vent 41F47, and exhausting via vent 432.

(56) One (1) Starch Product Bin #44, identified as 33V44, loaded pneumatically via Product Transfer to Milling, identified as 30F13, constructed in 1995, with emissions controlled by bin vent 33F44, and exhausting to stack 248.

(57) One (1) Starch Roll Dryer #301, identified as 19D301, constructed in 2006, with emissions uncontrolled, and exhausting to stacks 405A and 405B.

(58) One (1) Starch Roll Dryer #302, identified as 19D302, constructed in 2006, with emissions uncontrolled, and exhausting to stacks 406A and 406B.

(59) One (1) Starch Roll Dryer #303, identified as 19D303, constructed in 2006, with emissions uncontrolled, and exhausting to stacks 407A and 407B.

(60) One (1) Starch Roll Dryer #304, identified as 19D304, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stacks 408A and 408B.

(61) One (1) Starch Roll Dryer #305, identified as 19D305, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stacks 409A and 409B.

(62) One (1) Roll Dryer Mill Feed Collector, identified as 19F400, constructed in 2006, with emissions controlled by product collector/cyclone 19F400, and exhausting to the intake of Mill 19G401.

(63) One (1) Roll Dryer System Mill, identified as 19G401, constructed in 2006, with emissions controlled by integral product collector/baghouse 19F402, and exhausting to stack 366.

(64) One (1) Product Transfer to Bins #17 and #18, identified as 41C35, constructed in 1987, with emissions controlled by integral product collector/baghouses 41F20 and 41F21, respectively, and exhausting via vent 86 to stack 355.

(65) One (1) Product Bin #17, identified as 41V17, constructed in 1987, with emissions controlled by bin vent 41F22, and exhausting to stack 89.

(66) One (1) Product Bin #18, identified as 41V18, constructed in 1987, with emissions controlled by bin vent 41F23, and exhausting to stack 90.

(67) #2 Starch Agglomerator, identified as 52D210, approved in 2014 for construction, controlled by four product collection cyclones (52F220 - 52F223) and baghouse

52F230, and exhausting to stack 361. #2 Starch Agglomerator system consists of the following:

(A) One (1) dryer equipped with a direct-fired natural gas low NOx burner, with heat input capacity of 20 MMBtu/hr.

(B) One (1) mechanical fluid bed, identified as 52Y211, aspirated to the inlet of the agglomerator.

(C) One (1) fines recycle system, identified as 52C221, transferring product to the inlet of the agglomerator.

(D) One (1) #5 tote packing system with head hopper, identified as 52V245 and tote packer, identified as 52Z245 aspirated to the agglomerator #2 packer dust collector, identified as 52F225, exhausting via vent 362 to stack 361.

(E) One (1) #7 bag packing system with head hopper, identified as 52V247 and bag packer, identified as 52Z247 aspirated to the agglomerator #2 packer dust collector, identified as 52F225, exhausting via vent 362 to stack 361. General aspiration of the packer #7 bag conveying equipment is by the packer #6 House Dust Collector, identified as 56F602.

(F) One (1) reprocess bag dump, identified as 52V225, aspirated to the agglomerator #2 packer dust collector, identified as 52F225, and exhausting via vent 362 to stack 361. Reprocessed product is also transferred via a blower, identified as 52C224 to the packer dust collector, identified as 52F225, from the bag dump.

(68) Two (2) product storage bins, identified as 52V250 and 52V251, controlled by bin vent filters, identified as 52F250 and 52F251, and exhausting to stacks 401 and 402. Only one of the two product storage bins can receive product from the agglomerator at any time.

(69) #4 Starch Flash Dryer, identified as 54D450, approved in 2014 for construction, controlled by six product collection cyclones, identified as 54F451-54F456, followed by a wet scrubber, identified as 54F460, and exhausting to stack 388, limited to 250 million lb/year of propylated starch. #4 Starch Flash Dryer System consists of the following:

(A) One (1) dryer equipped with direct-fired natural gas low-NOx burner, with heat input capacity of 32MMBtu/hr.

(B) One (1) Starch Densifier Mill Surge Hopper, identified as 54V470, controlled by bin vent filter, identified as 54F471, and exhausting to stack 389.

(C) Three (3) Product Storage Bins, identified as 54V440, 54V441, and 54V4CC, equipped with bin vent filters, identified as 54F440, 54F441, and 54F4CC, and exhausting to stacks 385, 386, and 387.

(D) One (1) Product Bin #1, identified as 07V50, approved in 2014 for construction, formerly associated with Special Belt Dryer 16D5, with emissions controlled by bin vent 07F73, and exhausting to stack 109.

(E) One (1) Product Bin #2, identified as 07V49, approved in 2014 for construction, formerly associated with Special Belt Dryer 16D5, with emissions controlled by bin vent 07F72, and exhausting to stack 108.

(F) One (1) Product Bin #3, identified as 07V48, approved in 2014 for construction, formerly associated with Special Belt Dryer 16D5, with emissions controlled by bin vent 07F71, and exhausting to stack 107.

(h) Starch Packaging and Loadout Operations, consisting of:

(1) One (1) Product Bin #6/House Vacuum System, identified as 17V6, constructed in 1984, with emissions controlled by integral product receiver/cyclone 17F5 and baghouse 17F6, and exhausting via vent 190 to stack 177.

(2) One (1) Reprocess Bag Dump, identified as 17U58, constructed in 1997, with emissions controlled by baghouse 17F58, and exhausting indoors to stack 334.

(3) One (1) Reprocess Tote Dump, identified as 17U59, constructed in 1997, permitted in 2011, with emissions controlled by baghouse 17F58, and exhausting indoors to stack 334.

(4) One (1) Product Transfer to Main Packer #1, identified as 16F5, constructed in 1966, with emissions controlled by integral product collector/baghouse 16F5, and exhausting to stack 102.

(5) One (1) Cationic Product Receiver for Packer #1, identified as 17F27, constructed in 1966, with emissions controlled by integral baghouse 17F27, and exhausting to stack 102.

(6) One (1) Packer #1, identified as 17Z38, constructed in 1966, with emissions controlled by cyclone 17F9 and baghouse 17F10, and exhausting to stack 177.

(7) One (1) Packer #1 Reject Bag Dump, identified as 17V04, constructed in 2000, permitted in 2011, with emissions controlled by baghouse 17F10, and exhausting to stack 177.

(8) One (1) Bag Packer #2, identified as 17Z01, constructed in 1995, with emissions controlled by integral product collector/baghouse 17F01, and exhausting to stack 177.

(9) One (1) Bag Packer #2 House Dust Collector, identified as 17F02, constructed in 1995, with emissions controlled by baghouse 17F02, and exhausting to stack 177.

(10) One (1) Packer #2 Reject Bag Dump, identified as 17V05, constructed in 2000, permitted in 2011, with emissions controlled by baghouse 17F02, and exhausting to stack 177.

(11) One (1) Roll Dried Starch Product Transfer to Bag Packer #3 (41Z5), identified as 41F18, constructed in 2007, with emissions controlled by integral baghouse 41F18, and exhausting via vent 186 to stack 355.

(12) One (1) Roll Dried Starch Products Bag Packer #3, identified as 41Z5, constructed in 2007, with emissions controlled by baghouse 41F18, and exhausting via vent 186 to stack 355.

(13) One (1) Spray Cook Starch Product Transfer to Bag Packer #3 (41Z3), identified as 41F7, constructed in 2007, with emissions controlled by integral product collector/baghouse 41F7, and exhausting via vent 184 to stack 355.

(14) One (1) O.S. Starch Product Transfer to Bag Packer #3 (41Z3), identified as 41F181, constructed in 2007, with emissions controlled by integral baghouse 41F181, and exhausting via vent 184 to stack 355.

(15) One (1) Spray Cook/O.S. Starch Products Bag Packer #3, identified as 41Z3, constructed in 2007, with emissions controlled by integral product collector/baghouse 41F7 or baghouse 41F181, and exhausting via vent 184 to stack 355.

(16) One (1) Malto Product Transfer to Bag Packer #3 (41Z1), identified as 41F182, constructed in 2007, with emissions controlled by integral baghouse 41F182, and exhausting via vent 428 to stack 355.

(17) One (1) Malto Products Bag Packer #3, identified as 41Z1, constructed in 2007, with emissions controlled by baghouse 41F182, and exhausting via vent 428 to stack 355.

(18) One (1) Dry Starch Reacted Product Transfer to Bag Packer #3 (41Z2), identified as 41F183, constructed in 2007, with emissions controlled by integral baghouse 41F183, and exhausting via vent 429 to stack 355.

(19) One (1) Dry Starch Reacted Products Bag Packer #3, identified as 41Z2, constructed in 2007, with emissions controlled by baghouse 41F183, and exhausting via vent 429 to stack 355.

(20) One (1) Bag Packer #3 House Dust Collector, identified as 41F186, constructed in 2007, with emissions controlled by baghouse 41F186, and exhausting via vent 430 to stack 355.

(21) One (1) Bag Packer #3 House Dust Collector, identified as 41F44, constructed in 1995, with emissions controlled by baghouse 41F44, and exhausting via vent 256 to stack 361.

(22) One (1) Bag Packer #4, identified as 17Z03, constructed in 1995, with emissions controlled by integral product collector/baghouses 17F03 and 17F04, and exhausting via vent 332 to stack 356.

(23) One (1) House Dust Collection System for Bag Packer #4, identified as 17F15, constructed in 1995, with emissions controlled by baghouse 17F15, and exhausting via vent 333 to stack 356.

(24) One (1) Packer #4 Reject Bag/Tote Dump, identified as 17V06, constructed in 2000, permitted in 2011, with emissions controlled by baghouse 17F15, and exhausting via vent 333 to stack 356.

(25) One (1) Bag Packer #6 System, approved in 2014 for construction, consisting of the following:

(A) One (1) Packer #6 Product Receiver, identified as 56F601, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(B) One (1) Packer #6 Head Hopper, identified as 56V600, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(C) One (1) Bag Packer #6, identified as 56Z600, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(D) One (1) Reprocess Bag Dump Transfer Line, identified as 56C630, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(E) One (1) Packer #6 House Dust Collector, identified as 56F602, controlling emissions from Ultrasonic Sealers and Bag Conveying Systems associated with Packer #6 and Bag Packer Conveying Equipment associated with #2 Starch Agglomerator, and exhausting via vent 381 to stack 361.

(F) One (1) Reprocess Bag Dump, identified as 56V630 with emissions controlled by baghouse 56F602, and exhausting via vent 381 to stack 361.

(26) One (1) Product Transfer for Bulk Bagger #1 (16J44), identified as 16F25, constructed in 1988, with emissions controlled by integral product receiver/baghouse 16F25, and exhausting via vent 191 to stack 177.

(27) One (1) Bulk Bagger #1, identified as 16J44, constructed in 1988, permitted in 2011, with emissions controlled by integral product receiver/baghouse 16F25, and exhausting via vent 191 to stack 177.

(28) One (1) Product Transfer for Bulk Bagger #2 (17Z14), identified as 17F14, constructed in 1996, with emissions controlled by integral product receiver/baghouse 17F14, and exhausting to stack 254.

(29) One (1) Bulk Bagger #2, identified as 17Z14, constructed in 1996, with emissions controlled by integral product receiver/baghouse 17F14, and exhausting to stack 254.

(30) One (1) Product Receiver for Bulk Bagger #3, identified as 41F8, constructed in 1988, with emissions controlled by integral product receiver/baghouse 41F8, and exhausting via vent 208 to stack 355.

(31) Two (2) Product Receivers for Bulk Bagger #3, identified as 41F81 and 41F82, constructed in 1997, with emissions controlled by integral product receiver/baghouses 41F81 and 41F82, and exhausting via vent 208 to stack 355.

(32) One (1) Bulk Bagger #3, identified as 41Z6, constructed in 1988, permitted in 2011, with emissions controlled by cyclone 41F60 and baghouse 41F44, and exhausting via vent 256 to stack 361.

(33) One (1) Bulk #1 Product Screening System, identified as 20F1, constructed in 1997, with emissions controlled by integral product receiver/baghouse 20F1, and exhausting via vent 330 to stack 404.

(34) One (1) Bulk #2 Product Screening System, identified as 20F50, constructed in 1997, with emissions controlled by integral product receiver/baghouse 20F50, and exhausting via vent 331 to stack 404.

(35) One (1) Bulk Starch Rail Loadout #1 (Track #9), identified as 20F61, constructed in 1966, with emissions controlled by baghouse 20F61, and exhausting via vent 135 to stack 404.

(36) One (1) Bulk Starch Rail Loadout #2 (Track #10), identified as 20F60, constructed in 1993, with emissions controlled by baghouse 20F60, and exhausting via vent 79 to stack 404.

(37) One (1) Pneumatic Truck Loadout, identified as 20F78 and 20F79, constructed in 1997, with emissions controlled by baghouses 20F78 and 20F79, and exhausting via vent 264 to stack 404.

(38) One (1) Bulk Starch Rail Loadout #3 (J4), identified as 16F100, constructed in 1989, with emissions controlled by baghouse 16F100, and exhausting via vent 183 to stack 177.

(39) One (1) Dextrin/Roll/Spray Cooked Starch Bulk Truck Loadout, identified as 41F6, constructed in 1988, with emissions controlled by integral product receiver/baghouse 41F6, and exhausting to stack 189.

(i) Utility Area, consisting of:

(1) Three (3) natural gas-fired boilers, identified as 11B1, 11B2 and 11B3, constructed in 1966, each with a heat input capacity of 125 MMBtu/hr, with emissions uncontrolled, and exhausting to stack 197.

(2) One (1) NG-fired boiler, identified as 31B1, constructed in 1984 and modified in 2004 and 2014, with a heat input capacity of 231 MMBtu/hr, equipped with four (4) low-NO_x burners, using natural gas, and exhausting to stack 202.

(j) One (1) Wastewater Treatment Anaerobic Digester, identified as 34V10, constructed in 1985. Biogas emissions can be:

(1) Controlled by the use of an alkaline scrubber, identified as 34V11, for controlling H_2S emissions; and

(A) Used as fuel in fiber flash dryer furnace 21B501; and/or

(B) Used as fuel in gluten flash dryer 48D101; and/or

(C) Combusted in one (1) main flare (21Z1), exhausting to stack 271, if the biogas produced exceeds these emissions units' capacity;

or

(2) Combusted in one (1) emergency flare (34Z1), exhausting to stack 272.

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 also includes the following insignificant activities:

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

(b) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.

(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) Combustion source flame safety purging on startup.

(e) Gasoline fuel transfer dispensing operations handling less than or equal to 1,300 gallons per day and filling storage tanks having a capacity equal to or less than 10,500 gallons:

One (1) storage tank, identified as Tank #3, for storage of gasoline, located east of the Bag Storage Building, with a maximum volume of 1,000 gallons. [326 IAC 8-4-6] [326 IAC 8-4-9]

(f) 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.

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

(h) Refractory storage not requiring air pollution control equipment.

(i) Equipment used exclusively to fill drums, pails or other packaging containers with lubricating oils, waxes, and greases.

(j) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2] [326 IAC 8-3-5]

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

(l) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-3-2]

(m) Closed loop heating and cooling systems.

(n) Structural steel and bridge fabrication activities using 80 tons or less of welding consumables. [326 IAC 6-3-2]

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

(p) Activities associated with the transportation and treatment of sanitary sewage, provided discharge to the treatment plant is to an on-site sewage treatment facility.

(q) Any operation using aqueous solutions containing less than 1% by weight VOCs excluding HAPs.

(r) Noncontact, forced and induced, draft cooling tower systems not regulated under a NESHAP.

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

(t) Heat exchanger cleaning and repair.

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

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

(w) Asbestos abatement projects regulated by 326 IAC 14-10. [326 IAC 14-10]

(x) Purging of gas lines and vessels that are related 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.

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

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

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

(bb) Emergency generators as follows:

(1) One (1) emergency diesel generator, installed in 1998, identified as Wastewater Treatment Generator, with a maximum capacity of 317 hp. Under 40 CFR 63, Subpart ZZZZ, this is considered an existing affected source. [40 CFR 63, Subpart ZZZZ]

(cc) Purge double block and bleed valves.

(dd) Filter or coalescer media changeout.

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

(ff) Research and development activities as defined in 326 IAC 2-7-1(21)(E).

(gg) Propylene oxide storage tank and associated distribution system, including

(1) One (1) Propylene Oxide (PO) Tank, identified as 42V1, constructed in 1986, with a capacity of 30,000 gallons.

(2) Distribution system that includes railcar transfer rack, all valves, pumps, and sampling connections associated with the PO distribution system.

Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source. [40 CFR 63, Subpart EEEE]

(hh) Activities with potential emissions within any of the following thresholds: equal to or less than 5 pounds per hour or 25 pounds per day PM_{10}, SO_2, or NO_x; equal to or less than 3 pounds per hour or 15 pounds per day VOC; equal to or less than 25 pounds per day CO; equal to or less than 0.6 tons per year or 3.29 pounds per day Pb; or greater than 1 pound per day but less than 5 pounds per day or 1 ton per year single HAP (and not regulated by a NESHAP):

Buildings 7 and 25 --- Starch Bin Room and Belt Dryer Mill Room:
Belt Dryer Vacuum Filter Pump (S/V 178), identified as 07C3.

Building 11 --- Utilities and Chemical Unloading Area:
Sulfur Dioxide Storage Tank Three Relief Vents (S/V 170 - S/V 172), identified as 09V2.
Hot Oil Tank, identified as 11V199, with a capacity of 9,200 gallons.

Building 14 --- Steep Tank Area and Chemical Unloading Area:
Steep Evaporator Polish Heater (S/V 306), identified as 1472.
Dent 2 Starch Storage Tank (S/V 304), identified as 15V261.
Dent 3 Starch Storage Tank (S/V 302), identified as 15V244.
Dent 4 Starch Storage Tank (S/V 301), identified as 15V260.
Gluten Storage Tank (S/V 303), identified as 15V245.
Dilute Sulfuric Acid Tank (S/V 51), identified as 15V310.
Dow Quat Tank (S/V 57), identified as 14V112, constructed after 1984, with a capacity of 24,000 gallons.
Dilute Caustic Tank (S/V 58), identified as 14V106.
Dilute Caustic Tank (S/V 59), identified as 14V107.
Dilute Caustic Tank (S/V 150), identified as 09V95.
Bleach Tank (S/V 60), identified as 09V142.
Bleach Tank (S/V 61), identified as 09V143.
Acetic Anhydride Tank (S/V 56), identified as 15V228, with a capacity of 12,000 gallons.
Concentrated Sulfuric Acid Tank (S/V 52), identified as 14V309.
Phosphorus Oxychloride Tank Pressure Relief (S/V 55), identified as 15V229.
Hydrogen Peroxide Tank (S/V 54), identified as 09V232.
Steepwater Loadout (S/V 307), identified as 23L001.
Heavy Steep Water Tank (S/V 298), identified as 23V259.
Waxy Starch Storage (S/V 299), identified as 15V262.
Light Steepwater Storage Tank (S/V 300), identified as 14V21.
Dent 1 Starch Storage Tank (S/V 452), identified as 15V263, approved in 2014 for construction.
Waxy 2 Starch Storage Tank (S/V 451), identified as 15V265.
Tri-Polyphosphate Mix Tank (S/V 450), identified as 09V104.

Building 15 --- Wet Mill:
Mill House Steam Condensate Tank (S/V 5), identified as 14V165.
Steam Vapor Condensate Tank (S/V 151), identified as 14V89.
Mill House Good Steam Condensate Tank (S/V 152), identified as 14V132.
Steam Vent (S/V 153), identified as St. Vent.
Starch Reactor (S/V 155), identified as 15V277.

Building 16 --- Belt Dryers:
Belt Dryer Scrubber Pot (S/V 293), identified as 16F26.

Building 17 --- Starch Warehouse:
Belt Dryer Steam Exhaust (S/V 196), identified as 16V100.
Belt Dryer Scrubber Pot (S/V 295), identified as 17F78.

Buildings 18, 18B, and 18C --- Refinery Area:
Non-Propylene Oxide Starch Reactor (S/V 39), identified as 18V181.
N Octenyl Succinic Anhydride (NOSA) Tank, identified as 18V197, with a capacity of 13,000 gallons.
Filtration Hold and Enzyme Addition Tank, identified as 18V273, with a maximum capacity of 70,000 gallons.
Precoat Vacuum Filter (S/V 163C), identified as 18F55.
Precoat Filter Vacuum Pump (S/V 161C), identified as 18C255.

Starch Reslurry Tank, identified as 18V85.
Jet Cooker Feed Tank, identified as 18V165.
Starch Acid Mix Tank (S/V 322), identified as 18V99.
Jet Cooker Entry Chamber (S/V 320), identified as 18V67.
Enzyme Liquefaction Reactor (S/V 460), identified as 18V230
Enzyme Liquefaction Reactor (S/V 461), identified as 18V231
Maltodextrin Tank, identified as 18V167.
Maltodextrin Tank, identified as 18V168.
Maltodextrin Tank, identified as 18V169.
Maltodextrin Tank, identified as 18V176.
Maltodextrin Tank, identified as 18V177.
Maltodextrin Tank, identified as 18V184.
Pre-Evaporator Feed Tank, identified as 18V94.
Syrup Pre-Evaporator, identified as 14X20.
High DS Vacuum Filter Pump (S/V 309), identified as 18P390.
High DS Vacuum Filter Pump (S/V 309), identified as 18P391.
Precoat Vacuum Filter (S/V 163D), identified as 18F56.
Precoat Vacuum Filter (S/V 163E), identified as 18F20.
Precoat Vacuum Filter (S/V 163A), approved in 2014 for construction, identified as 18F57.
Precoat Filter Vacuum Pump (S/V 161D), identified as 18C156.
Precoat Filter Vacuum Pump (S/V 161E), identified as 18C20.
Precoat Filter Vacuum Pump (S/V 161A), approved 2014 for construction, identified as 18C57.
Booster Vacuum Pump (S/V 161F), identified as 18C16.
Condensate Receiver (S/V 162A), identified as 18V211.
Condensate Receiver (S/V 162B), identified as 18V221.
Steam Relief Vent (S/V 159), identified as St. Vent.
Steam Relief Vent (S/V 9), identified as 18X81.
Malto Evaporator (S/V 10), identified as 18X32.
Jet Converter Hotwell (S/V 165C), identified as 18V28.
Belt Dryer Vacuum Cleaning System, identified as 18F37.
Precoat Makeup Tank (S/V 6), identified as 18V78.
Precoat Feed Tank (S/V 323), identified as 18V72.
Expansion Tank for Hot Oil, identified as 18V200, with a capacity of 2,500 gallons.
Non-Propylene Oxide Starch Reactor (S/V 39), identified as 18V182.
Non-Propylene Oxide Starch Reactor (S/V 40), identified as 18V183.
Non-Propylene Oxide Starch Reactor (S/V 401), identified as 18V272.

<u>Building 19 --- Roll Dryer System:</u>
Roll Dryer Supply Tank (S/V 439), identified as 18V166.
Roll Dryer Vacuum Filter (S/V 440), identified as 19F201.
Roll Dryer Vacuum Filter Vacuum Pump (S/V 441), identified as 19C241.
Roll Dryer Feed Tank (S/V 442), identified as 19V205.

<u>Building 21 --- Feed House:</u>
Sump Collection Tank (S/V 305), identified as 21V206.

<u>Building 34 --- Waste Treatment Building:</u>
Bleach Storage Tank (S/V 63), identified as 34V50.
Ammonia Storage Tank (S/V 62), identified as 34V1.
Mannic Polymer Tank (S/V 319), with a capacity of 17,000 gallons.

<u>Building 41 --- Roll Dryers:</u>
Roll Dryer Supply Tank (S/V 193), identified as 41V104.
Roll Dryer Supply Tank (S/V 194), identified as 41V105.

Roll Dryer Filter Feed Tank (S/V 292), identified as 41V101.
Roll Dryer Vacuum Filter Vacuum Pump (S/V 192), identified as 41C110.
Roll Dryer Vacuum Filter Vacuum Pump (S/V 270), identified as 41C111.

Building 45 --- Propylene Oxide Reactors:

Propylene Oxide Reactor (45V223) Pressure Relief Vent (S/V 13), identified as 45V223.
Propylene Oxide Reactor (45V223) Vent Fan (S/V 32), identified as 45C223.
Propylene Oxide Reactor (45V240) Pressure Relief Vent (S/V 15), identified as 45V240.
Propylene Oxide Reactor (45V240) Vent Fan (S/V 16), identified as 45C240.
Propylene Oxide Reactor (45V241) Pressure Relief Vent (S/V 25), identified as 45V241.
Propylene Oxide Reactor (45V241) Vent Fan (S/V 26), identified as 45C241.
Propylene Oxide Reactor (45V242) Pressure Relief Vent (S/V 27), identified as 45V242.
Propylene Oxide Reactor (45V242) Vent Fan (S/V 28), identified as 45C242.
Propylene Oxide Reactor (45V243) Pressure Relief Vent (S/V 29), identified as 45V243.
Propylene Oxide Reactor (45V243) Vent Fan (S/V 30), identified as 45C243.
Propylene Oxide Reactor (45V246) Pressure Relief Vent (S/V 35), identified as 45V246.
Propylene Oxide Reactor (45V246) Vent Fan (S/V 36), identified as 45C246.
Propylene Oxide Reactor (45V247) Pressure Relief Vent (S/V 37), identified as 45V247.
Propylene Oxide Reactor (45V247) Vent Fan (S/V 38), identified as 45C247.
Propylene Oxide Reactor (45V248) Pressure Relief Vent (S/V 217), identified as 45V248.
Propylene Oxide Reactor (45V248) Vent Fan (S/V 218), identified as 45C248.
Propylene Oxide Reactor (45V270) Pressure Relief Vent (S/V 44), identified as 45V270.
Propylene Oxide Reactor (45V270) Vent Fan (S/V 44), identified as 45C270.
Propylene Oxide Reactor (45V271) Pressure Relief Vent (S/V 46), identified as 45V271.
Propylene Oxide Reactor (45V271) Vent Fan (S/V 46), identified as 45C271.
Propylene Oxide Reactor (45V280) Pressure Relief Vent (S/V 336), identified as 45V280.
Propylene Oxide Reactor (45V280) Vent Fan (S/V 336), identified as 45C280.
Propylene Oxide Reactor (45V281) Pressure Relief Vent (S/V 337), identified as 45V281.
Propylene Oxide Reactor (45V281) Vent Fan (S/V 337), identified as 45C281.
Propylene Oxide Reactor (45V292) Pressure Relief Vent (S/V 412), identified as 45V292.
Propylene Oxide Reactor (45V292) Vent Fan (S/V 412), identified as 45C292.
Propylene Oxide Reactor (45V293) Pressure Relief Vent (S/V 413), identified as 45V293.
Propylene Oxide Reactor (45V293) Vent Fan (S/V 413), identified as 45C293.
Propylene Oxide Reactor (45V294) Pressure Relief Vent (S/V 414), identified as 45V294.
Propylene Oxide Reactor (45V294) Vent Fan (S/V 414), identified as 45C294.
Propylene Oxide Reactor (45V295) Pressure Relief Vent (S/V 415), identified as 45V295.
Propylene Oxide Reactor (45V295) Vent Fan (S/V 415), identified as 45C295.
Propylene Oxide Reactor (45V296) Pressure Relief Vent (S/V 416), identified as 45V296.
Propylene Oxide Reactor (45V296) Vent Fan (S/V 416), identified as 45C296.
Propylene Oxide Reactor (45V298) Pressure Relief Vent (S/V 417), identified as 45V298-PRV.
Propylene Oxide Reactor (45V298) Vent Fan, identified as 45C298, approved in 2014 for construction, uncontrolled and utilized after the acid-kill, and exhausting to stack 417.
Propylene Oxide Reactor (45V299) Pressure Relief Vent (S/V 418), identified as 45V299-PRV.
Propylene Oxide Reactor (45V299) Vent Fan, identified as 45C299, approved in 2014 for construction, uncontrolled and utilized after the acid-kill, and exhausting to stack 418.
PO Scrubber Sulfuric Acid Tank, identified as 45V212, with a capacity of 25,000 gallons.
Sodium Sulfate Liquid Storage Tank (S/V 65), identified as 45V252.

Building 46 --- Spray Dryer #2:

Cooker Product Tank (S/V 437), identified as 46V294.
Product Tank (S/V 438), identified as 46V296.

Wet Milling Operations

Corn Heater Tank, identified as 14V600, with emissions controlled by alkaline scrubber

15F401, and exhausting to stack 17.

Steepwater Evaporator Vacuum Pump, identified as 14P510, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

Steepwater Evaporator, Vacuum Pump, approved in 2014 for construction, identified as 14P511, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

Third Grind Receiver Tank, identified as 15V33, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

Germ Dewatering Press, identified as 15J103, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

One (1) Dent Starch Slurry Storage Tank, identified as 15V43, constructed in 1966.

120 Degree Water Tank, identified as 21V103.

Millhouse Floor Water Tank, identified as 21V1

Gluten Filter Seal Water Tank, identified as 21V205

Feed/Meal/Germ Production Operations

Fiber Flash Dryer Paddle Mixer, identified as 21U501.

RST Feed Dryer Mixer, identified as 21J47.

RST Germ Dryer Discharge Conveyor, identified as 21U403.

Hammermill Feed Drag Conveyor, identified as 21U313.

Hammermill Discharge Transfer Conveyor, identified as 21U315.

Feed Loadout Transfer Conveyor, identified as 21U201.

Product Collector Conveyor, identified as 12U10.

Truck Loadout Conveyor, identified as 12U54.

Syrup Refining Operations

Reject Flash Enzyme Chamber, identified as 18V313.

Starch Modification Operations

Flash 3 Larox Filter Feed Tank, identified as 43V73.

Dryer Starch Feed Conveyor/Flash 3 Paddle Mixer, identified as 43U74.

Roll Dryer 1 Reslurry Tank, identified as 41V103.

Roll Dryer 2 Reslurry Tank, identified as 19V200.

One (1) Starch Reactor, identified as 18V180, constructed in 1994, with emissions uncontrolled, and exhausting to stack 42.

One (1) Starch Reactor, identified as 18V179, constructed in 1994, with emissions uncontrolled, and exhausting to stack 42.

One (1) 10,000 gallon sodium bisulfite Storage Tank, Identified as 18V108, approved in 2014 for construction, with emissions uncontrolled and exhausting to stack 456.

One (1) 10,000 gallon Sodium chlorite Storage Tank, Identified as 18V109, approved in 2014 for construction, with emissions uncontrolled and exhausting to stack 457.

One (1) Roll Dryer Rotary Vacuum Filter, approved 2014 for construction, identified as 18F53, with emissions uncontrolled, and exhausting to stack 163B.

One (1) Roll Dryer Rotary Filter Vacuum Pump, approved in 2014 for construction, identified as 18C233 with emissions uncontrolled, and exhausting to stack 161B.

Starch Drying and Handling Operations

Agglomerator Feed Blender, identified as 50U106.

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); or

(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, T157-27029-00003, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) All terms and conditions of permits established prior to T157-27029-00003 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

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

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

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

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

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

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

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

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

(1) That this permit contains a material mistake.

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

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

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

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

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

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Request for renewal shall be submitted to:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(4) The Permittee notifies the:

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

and

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

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

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b) 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)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

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

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

(3) Any change in emissions; and

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

C.2 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

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

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

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

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

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

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

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

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

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

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

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

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

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

C.8 Performance Testing [326 IAC 3-6]

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

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

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

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

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

(b) 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.

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

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

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

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

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

C.12 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

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

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

C.13 Risk Management Plan [326 IAC 2-7-5(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.14 Response to Excursions or Exceedances [40 CFR 64] [326 IAC 3-8] [326 IAC 2-7-5] [326 IAC 2-7-6]

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

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

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

(1) initial inspection and evaluation;

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

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

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

(1) monitoring results;

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

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

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

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

(II)

(a) CAM Response to excursions or exceedances.

(1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing

emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

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

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

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

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

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

(f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:
(1) Failed to address the cause of the control device performance problems; or
(2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

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

(h) CAM recordkeeping requirements.

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

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

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

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

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

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

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

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

C.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

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

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

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(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.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following:
  - (AA) All calibration and maintenance records.
  - (BB) All original strip chart recordings for continuous monitoring instrumentation.
  - (CC) Copies of all reports required by the Part 70 permit.

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

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

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

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

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

(A) A description of the project.

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

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

(i) Baseline actual emissions;

(ii) Projected actual emissions;

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

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

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

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

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

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

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

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

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

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

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

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

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

(b) The address for report submittal is:

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

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

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

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

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

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

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

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

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

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

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

Reports required in this part shall be submitted to:

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

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

Stratospheric Ozone Protection

C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Corn Receiving and Handling Operations, consisting of:

(1) One (1) Railcar Corn Dump Hopper, identified as 12V101, constructed in 1966, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(2) One (1) Truck Corn Dump Hopper, identified as 12V102, constructed in 1966, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(3) One (1) Corn Transfer Conveyor, identified as 8U1, constructed in 2007, permitted in 2011, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(4) One (1) Bucket Corn Elevator, identified as 12U2, constructed in 2006, permitted in 2011, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(5) Two (2) Corn Transfer Conveyors, identified as 12U4 and 12U5, constructed in 2007, permitted in 2011, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(6) Five (5) Corn Storage Silos, identified as 13V1, 13V2, 13V3, 13V4 and 13V5, constructed in 1966, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(7) Three (3) Corn Transfer Conveyors, identified as 13U6, 13U7, and 13U8, constructed in 2007, permitted in 2011, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(8) One (1) Corn Cleaner Fill Conveyor, identified as 14U12, constructed in 2007, permitted in 2011, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(9) One (1) Vibrating Corn Cleaning System, identified as 14J5, constructed in 2007, permitted in 2011, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(10) One (1) Corn Cleanings Pneumatic Transfer, identified as 14C300, constructed in 2007, permitted in 2011, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

(11) One (1) Bucket Elevator from Corn Cleaner to Steeps, identified as 14U9, constructed in 1966, with emissions controlled by baghouse 08F300, and exhausting to stack 433.

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

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

D.1.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3:

(a) The following emission units shall be controlled for PM and PM_{10} using best available control technology (BACT):

12V101, 12V102, 8U1, 12U2, 12U4, 12U5, 13V1, 13V2, 13V3, 13V4, 13V5, 13U6, 13U7, 13U8, 14U12, 14J5, 14C300, and 14U9.

(b) Best available control technology (BACT) for PM and PM_{10} (Filterable and Condensable) shall be the use of baghouse 08F300, and:

(1) PM emissions from baghouse 08F300 shall not exceed 0.004 gr/dscf.

(2) PM_{10} (Filterable and Condensable) emissions from baghouse 08F300 shall not exceed 0.004 gr/dscf.

(3) PM emissions from baghouse 08F300 shall not exceed 1.16 pounds per hour.

(4) PM_{10} (Filterable and Condensable) emissions from baghouse 08F300 shall not exceed 1.16 pounds per hour.

(5) The opacity from the baghouse 08F300 shall not exceed 3%.

Compliance Determination Requirements

D.1.2 Particulate Control

In order to comply with Condition D.1.1, baghouse 08F300 for particulate control shall be in operation and control emissions from emission units 12V101, 12V102, 8U1, 12U2, 12U4, 12U5, 13V1, 13V2, 13V3, 13V4, 13V5, 13U6, 13U7, 13U8, 14U12, 14J5, 14C300, and 14U9 at all times when an emission unit that the baghouse controls is in operation.

D.1.3 Broken or Failed Bag Detection – Single Compartment Baghouse

(a) For a single compartment baghouse controlling emissions from a process operated continuously, the feed to the 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, dust traces, or triboflows.

D.1.4 Testing Requirements [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.1.1, the Permittee shall perform PM and PM_{10} testing of baghouse 08F300 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 obligations with regard to the performance testing required by this condition. PM_{10} includes filterable and condensable PM.

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

D.1.5 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of the exhaust from stack 433 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.6 Baghouse Parametric Monitoring [40 CFR 64]

(a) The Permittee shall record the pressure drop across baghouse 08F300 used in conjunction with emission units 12V101, 12V102, 8U1, 12U2, 12U4, 12U5, 13V1, 13V2, 13V3, 13V4, 13V5, 13U6, 13U7, 13U8, 14U12, 14J5, 14C300, and 14U9 at least once per day when any of these emission units is in operation.

(b) When, for any one reading, the pressure drop across the baghouse is outside of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop of 0.5 and 7.5 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(c) 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 or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer's specifications, if used.

D.1.7 Broken or Failed Bag Detection – Multi-Compartment Baghouse

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

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

D.1.8 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.5, the Permittee shall maintain a daily record of visible emission notations of stack 433 for the baghouse 08F300 exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(b) To document the compliance status with Condition D.1.6, the Permittee shall maintain a daily record of the pressure drop across baghouse 08F300 controlling the stack 433 exhaust. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

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

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b) Wet Milling Operations, consisting of:

(1) Twelve (12) Corn Steep Tanks, identified as 14V3 through 14V14, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(2) Two (2) Corn Steep Tanks, identified as 14V15 and 14V16, constructed in 1990, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(3) Three (3) Corn Steep Tanks, identified as 14V400, 14V401, and 14V402, constructed in 2006, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(4) One (1) High DS Starch Filter, identified as 18F510, constructed in 1995, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(5) One (1) Third Stage Germ Wash Screen, identified as 15J203, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(6) One (1) Light Steepwater Receiver Tank, identified as 14V19, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(7) One (1) High DS Starch Tank, identified as 18V520, constructed in 1995, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(8) One (1) High DS Starch Wash Water Tank, identified as 18V522, constructed in 1995, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(9) Seven (7) Grit Starch Separator (Third Grind) Screens, identified as 15J15 through 15J19, 15J21, and 15J22, constructed in 1990, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(10) Two (2) Grit Starch Separator Screens, identified as 15J39 and 15J40, approved in 2014 for construction, with emissions voluntarily vented to alkaline scrubber 15F401, and exhausting to stack 17.

(11) Six (6) Sixth Stage Fiber Wash Screens, identified as 15J86, 15J87, 15J88, 15J89, 15J220, and 15J221, constructed in 1966, emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(12) Two (2) First Stage Germ Wash Screens, identified as 15J100 and 15J101, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(13) One (1) Second Stage Germ Wash Screen, identified as 15J99, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(14) One (1) Second Pass Germ Feed Tank, identified as 15V25, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(15) One (1) Grit Starch Feed Tank, identified as 15V26, constructed in 1966, with

emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(16) One (1) Fiber Supply Tank, identified as 21V33, constructed in 2000, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(17) One (1) Steeped Corn Separator, identified as 15J5A, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(18) One (1) First Pass Germ Feed Tank, identified as 15V23, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(19) One (1) Second Stage Germ Wash Screen, identified as 15J53, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(20) Two (2) Second Grind Dewatering Screens, identified as 15J14 and 15J3, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(21) One (1) First Grind Receiver Tank, identified as 15V22, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(22) One (1) Second Grind Receiver Tank, identified as 15V24, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(23) One (1) Third Grind Discharge Tank, identified as 15V27, constructed in 1995, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(24) One (1) Clamshell Wash Water Tank, identified as 15V2, constructed in 1991, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(25) One (1) Steeped Corn Pump Tank, identified as 14V17, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(26) One (1) Germ Water Tank, identified as 15V139, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(27) One (1) Steepwater Head Tank, identified as 14V18, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(28) One (1) Steep Acid Tank, identified as 14V20, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(29) Five (5) Fiber Wash Receiver Tanks, identified as 15V110 through 15V114, constructed in 1966, providing aspiration to 1st through 5th Stage Fiber Wash Screens, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(30) One (1) Process Water Tank, identified as 15V30, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(31) One (1) Primary Wash Water Tank, identified as 15V41, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(32) One (1) Wash Water Surge Tank, identified as 15V38, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(33) One (1) Primary Feed Tank, identified as 15V34, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(34) One (1) Primary Underflow Tank, identified as 15V35, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(35) One (1) Gluten Thickener Feed Tank, identified as 15V36, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(36) One (1) Heavy Gluten Tank, identified as 15V37, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(37) One (1) Clarifier Feed Tank, identified as 15V40, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(38) One (1) MST Feed Tank, identified as 15V31, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(39) One (1) Gluten Vacuum Filter, identified as 21F5, approved in 2014 for construction, with emissions voluntarily vented to alkaline scrubber 15F401, and exhausting to stack 17.

(40) One (1) Gluten Vacuum Filter Pump, identified as 21C105, approved in 2014 for construction, with emissions voluntarily vented to alkaline scrubber 15F401, and exhausting to stack 17.

(41) One (1) Gluten Vacuum Filter, identified as 21F6, constructed in 2006, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(42) One (1) Gluten Vacuum Filter Pump, identified as 21C6, constructed in 2006, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(43) One (1) Gluten Vacuum Filter, identified as 21F7, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(44) One (1) Gluten Vacuum Filter Pump, identified as 21C7, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(45) One (1) Gluten Vacuum Filter, identified as 21F8, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(46) One (1) Gluten Vacuum Filter Pump, identified as 21C8, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(47) One (1) Gluten Vacuum Filter, identified as 21F9, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(48) One (1) Gluten Vacuum Filter Pump, identified as 21C9, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(49) One (1) Gluten Vacuum Filter, identified as 21F10, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(50) One (1) Gluten Vacuum Filter Pump, identified as 21C10, constructed in 1966, with

emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(51) One (1) Fiber Dewatering Screen, identified as 21F100, constructed in 1990, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(52) One (1) Fiber Dewatering Screen, identified as 21F101, constructed in 1990, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.

(53) One (1) Gluten Filter Bowl Drain Tank, identified as 21V159, constructed in 1990, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(54) One (1) Gluten Filter Wash Bar Trough Drain Tank, identified as 21V59, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(55) One (1) Fiber Filtrate Tank, identified as 21V58, constructed in 1990, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(56) One (1) Heavy Steepwater Tank, identified as 21V56, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(57) One (1) Monitor Tank, identified as 15V210, constructed in 1990, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

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

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

D.2.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3:

(a) The following emission units shall be controlled for sulfur dioxide (SO_2) and VOC using the BACT:

(1) Wet Milling Operations, including 14V3 through 14V16, 14V400, 14V401, 14V402, 18F510, 15J101, 15J203, 14V19, 18V520, 18V522, 15J15 through 15J19, 15J21, 15J22, 15J86, 15J87, 15J88, 15J89, 15J220, 15J221, 15J100, 15J99, 15V25, 15V26, 21V33, 15J5A, 15V23, 15J53, 15J14, 15J3, 15V22, 15V24, 15V27, 15V2, 14V17, 15V139, 1st Stage through 5th Stage Fiber Wash Screens, 14V18, 14V20, 15V110 through 15V114, 15V30, 15V41, 15V38, 15V34, 15V35, 15V36, 15V37, 15V40, 15V31, 21F6, 21C6, 21F7, 21C7, 21F8, 21C8, 21F9, 21C9, 21F10, 21C10, 21F100, 21F101, 21V159, 21V59, 21V58, 21V56, and 15V210; and

(2) Feed/Meal/Germ Production Operations, including 21D3.

(b) For these units, the BACT for SO_2 is the use of alkaline scrubber 15F401, and:

(1) When the inlet SO_2 concentration to the scrubber is greater than 150 ppmvw, the scrubber shall have a minimum SO_2 control efficiency of 90%, and the scrubber outlet SO_2 emission rate shall not exceed 8.17 lbs/hr SO_2; and

(2) When the inlet SO_2 concentration to the scrubber is 150 ppmvw or less, the scrubber shall have an outlet SO_2 concentration of less than 15 ppmvw, and the scrubber outlet SO_2 emission rate shall not exceed 8.17 lbs/hr.

(c) For these units, the BACT for VOC is the use of an absorption system using wet scrubber 15F401, and:

(1) The scrubber shall have a minimum VOC control efficiency of 25%; and

(2) The scrubber outlet VOC emission rate shall not exceed 27 lbs/hr.

D.2.2 Prevention of Significant Deterioration (PSD) Minor Limit SO_2, VOC [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable to the 2014 modification, the Permittee shall comply with the following:

(a) The uncontrolled SO_2 emissions rate from the Grit Starch Separator Screens, identified as 15J39 and 15J40 shall not exceed 0.11 pounds per hour.

(b) The uncontrolled VOC emissions rate from the Grit Starch Separator Screens, identified as 15J39 and 15J40 shall not exceed 0.09 pounds per hour.

(c) The combined uncontrolled SO_2 emissions rate from the Gluten Vacuum Filter, identified as 21F5, and the Gluten Filter Vacuum Pump, identified as 21C105, shall not exceed 0.25 pounds per hour.

(d) The combined uncontrolled VOC emissions rate from the Gluten Vacuum Filter, identified as 21F5, and the Gluten Filter Vacuum Pump, identified as 21C105, shall not exceed 1.60 pounds per hour.

Compliance with these limits, in combination with the limits in Conditions D.4.1, D.5.2, D.7.3, D.8.3 and D.9.2, shall limit the net emissions increase from the 2014 modification to less than twenty-five (25) tons PM, fifteen (15) tons PM_{10}, ten (10) tons $PM_{2.5}$, forty (40) tons SO_2, forty (40) tons NO_X, forty (40) tons VOC, and one-hundred (100) tons CO per twelve consecutive month period, and therefore, render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2014 modification.

Compliance Determination Requirements

D.2.3 Sulfur Dioxide (SO_2) and Volatile Organic Compounds (VOC) Control

In order to comply with Condition D.2.1 and D.2.2, scrubber 15F401 used for SO_2 and VOC control shall be in operation and control SO_2 and VOC emissions at all times when any of the following emission units that are aspirated to the scrubber are in operation:

(a) Wet Milling Operations, including 14V3 through 14V16, 14V400, 14V401, 14V402, 18F510, 15J101, 15J203, 14V19, 18V520, 18V522, 15J15 through 15J19, 15J21, 15J22, 15J39, 15J40, 15J86, 15J87, 15J88, 15J89, 15J220, 15J221, 15J100, 15J99, 15V25, 15V26, 21V33, 15J5A, 15V23, 15J53, 15J14, 15J3, 15V22, 15V24, 15V27, 15V2, 14V17, 15V139, 1st Stage through 5th Stage Fiber Wash Screens, 14V18, 14V20, 15V110 through 15V114, 15V30, 15V41, 15V38, 15V34, 15V35, 15V36, 15V37, 15V40, 15V31, 21F5, 21C105, 21F6, 21C6, 21F7, 21C7, 21F8, 21C8, 21F9, 21C9, 21F10, 21C10, 21F100, 21F101, 21V159, 21V59, 21V58, 21V56, and 15V210;

(b) Feed/Meal/Germ Production Operations, including 21D3;

(c) Syrup Refining Operations, including 18V413, 18V513; and

(d) Insignificant Activities, including 14V600, 14P510, 14P511, 15V33, 21U403, and 14X20.

D.2.4 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.2.1(b), D.2.1(c), and D.2.2, the Permittee shall perform SO_2 and VOC testing of scrubber 15F401, utilizing methods as approved by the Commissioner, at least once every five (5) years from the date of the most recent valid compliance demonstration.

(b) In order to demonstrate compliance with Conditions D.2.2 and D.4.1(a) and (b), the Permittee shall perform SO_2 and VOC testing of scrubber 15F401 no later than 180 days after the startup of the Gluten Vacuum Filter, identified as 21F5, the Gluten Filter Vacuum Pump, identified as 21C105, and the Grit Separator Screens, identified as 15J39 and 15J40, and the Jet Conversion Flash Chamber (ID 18V513), utilizing methods as approved by the Commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

(c) 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 obligations with regard to the performance testing required by this condition.

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

D.2.5 Scrubber Parametric Monitoring [40 CFR 64]

(a) Pursuant to 40 CFR 64 (CAM), the Permittee shall monitor and record the scrubber recirculation rate from scrubber 15F401 at least once per day when any of the emission units being aspirated to scrubber 15F401 are in operation.

(1) From the date of startup until the stack test results are available, the Permittee shall maintain the flow rate at or above the minimum of 400 gallons per minute. If the flow rate falls below 400 gallons per minute, the Permittee shall take a reasonable response.

(2) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Condition D.2.1.

(3) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate as observed during the latest compliant stack test. If the flow rate falls below the level observed during the latest compliant stack test, the Permittee shall take a reasonable response.

(4) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A flow rate reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) Pursuant to 40 CFR 64 (CAM), within ninety (90) days from the issuance date of Significant Permit Modification 157-30882-00003, the Permittee shall monitor and record the scrubber make-up water flow from scrubber 15F401 continuously when any of the emission units being aspirated to scrubber 15F401 are in operation.

(1) From the date of startup until the stack test results are available, the Permittee shall maintain the flow rate at or above the minimum of five (5) gallons per minute. If the flow rate falls below five (5) gallons per minute, the Permittee shall

take a reasonable response.

(2) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Condition D.2.1.

(3) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate as observed during the latest compliant stack test. If the flow rate falls below the level observed during the latest compliant stack test, the Permittee shall take a reasonable response.

(4) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A flow rate 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.

(c) The Permittee shall monitor and record the pH across scrubber 15F401 at least once per day when any of the emission units being aspirated to scrubber 15F401 are in operation.

(1) When, for any one reading, the pH across the scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pH between 7 and 9 unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. A pH reading that is outside the above mentioned range is not a deviation from this permit.

(2) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A pH reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(d) The instruments used for determining the pH and flow rates 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 or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer's specifications, if used.

(e) 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.2.6 Scrubber Failure Detection

In the event that scrubber failure for the emission units being aspirated to scrubber 15F401 has been observed:

The feed to the process shall be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the 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).

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

D.2.7 Record Keeping Requirements

(a) To document compliance with Condition D.2.5, the Permittee shall maintain a daily record of:

(1) The scrubber recirculation rate across scrubber 15F401 controlling the Wet Milling Operation exhaust. The Permittee shall include in its daily record when a scrubber recirculation rate reading is not taken and the reason for the lack of a scrubber recirculation rate reading (e.g. the process did not operate that day).

(2) The scrubber make-up water flow, as read by the continuous monitor, from scrubber 15F401 controlling the Wet Milling Operation exhaust. The Permittee shall include in its daily record when a make-up water flow reading is not taken and the reason for the lack of a make-up water flow reading (e.g. the process did not operate that day).

(3) The pH across scrubber 15F401 controlling the Wet Milling Operation exhaust. The Permittee shall include in its daily record when a pH reading is not taken and the reason for the lack of a pH reading (e.g. the process did not operate that day).

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

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(c) Feed/Meal/Germ Production Operations, consisting of:

(1) One (1) Fiber Flash Dryer, identified as 21D501, constructed in 2007. PM and PM_{10} emissions are controlled by integral product collectors/cyclones 21F501-21F502, then PM, PM_{10} and sulfur dioxide emissions are controlled by scrubber 21F13, then VOC emissions are controlled by Thermal Oxidation Units 48F201 and 48F202, before exhausting to stack 17.

(2) One (1) natural gas or biogas fired Fiber Flash Dryer Furnace, identified as 21B501, constructed in 2007, with a heat input capacity of 60 MMBtu/hr, with emissions uncontrolled, and exhausting to stack 17. This emissions unit is part of Fiber Flash Dryer 21D501 for the purposes of NSPS, 40 CFR 60, Subpart Dc. Under 40 CFR 60, Subpart Dc, this is considered an affected source. [40 CFR 60, Subpart Dc]

(3) Two (2) Natural Gas Fired Thermal Oxidation Units, identified as 48F201 and 48F202, constructed in 2006, with a heat input capacity of 5 million Btu per hour, each.

(4) One (1) Corn Cleanings Receiver, identified as 21F304, loaded pneumatically via Corn Cleanings Pneumatic Transfer, identified as 08C304, constructed in 2007, with emissions controlled by scrubber 21F311, exhausting as combustion air into the furnace of Gluten Flash Dryer 48D101 and/or the Fiber Flash Dryer Furnace 21B501 and/or with PM and PM_{10} emissions controlled by Thermal Oxidation Units 48F201 and 48F202; before exhausting to stack 17.

(5) One (1) RST Feed Dryer, identified as 21D301, constructed in 2006. PM and PM_{10} emissions are controlled by product collector/cyclone 21F301, then PM, PM_{10} and sulfur dioxide emissions are controlled by scrubber 21F13, then VOC emissions are controlled by Thermal Oxidation Units 48F201 and 48F202, before exhausting to stack 17.

(6) One (1) natural gas or biogas fired Gluten Flash Dryer, identified as 48D101, constructed in 2007, with a heat input capacity of 30 MMBtu/hr. PM and PM_{10} emissions are controlled by integral product collectors/cyclones 48F101-48F102, then PM, PM_{10} and sulfur dioxide emissions are controlled by scrubber 21F13, then VOC emissions are controlled by Thermal Oxidation Units 48F201 and 48F202, before exhausting to stack 17.

(7) One (1) 48D101 Dryer Air Conveying Line, identified as AC8, constructed in 1966, with emissions controlled by integral product collector/baghouse 21F36, and exhausting to stack 145.

(8) One (1) RST Germ Dryer, identified as 21D401, constructed in 2006. PM and PM_{10} emissions are controlled by product collector/cyclone 21F401, then PM, PM_{10} and sulfur dioxide emissions are controlled by scrubber 21F13, then VOC emissions are controlled by Thermal Oxidation Units 48F201 and 48F202, before exhausting to stack 17.

(9) Two (2) Water Tube Germ Cooler Rotary Airlock Valves, identified as 21D3 (formerly Germ Dryer 21D3), loaded pneumatically via Germ Pneumatic Transfer 21C404 and Germ Cooler Cyclone 21F404, constructed in 2007, with pneumatic transfer blowback air controlled by an alkaline scrubber 15F401, and exhausting to stack 17 (see Section

D.2 for the control device monitoring requirements).

(10) One (1) Feed Cooler, identified as 21D8 (formerly Meal Dryer 21D8), constructed in 1966 and modified in 2007. PM and PM_{10} emissions are controlled by product collector/cyclone 21F310, then PM and PM_{10} emissions controlled by scrubber 21F311, exhausting as combustion air into the furnace of Gluten Flash Dryer 48D101 and/or the Fiber Flash Dryer Furnace 21B501, and/or with PM and PM_{10} emissions controlled by Thermal Oxidation Units 48F201 and 48F202, before exhausting to stack 17.

(11) One (1) Feed Mill, identified as 21G351, constructed in 2007, with emissions controlled by scrubber 21F312, and exhausting to stack 444.

(12) One (1) Feed Mill, identified as 21G352, constructed in 2007, with emissions controlled by scrubber 21F312, and exhausting to stack 444.

(13) One (1) Feed Milling Loadout Conveyor, identified as 21U314, constructed in 2007, with emissions controlled by scrubber 21F312, and exhausting to stack 444.

(14) One (1) Feed Loadout Hopper, identified as 21V125, permitted in 2005, with emissions aspirated to the inlet of Feed Cooler 21D8 to be used as cooling air.

(15) One (1) Feed Storage Bin, identified as 8V121, constructed in 1966, loaded pneumatically, with emissions controlled by bin vent 8F1, and exhausting to stack 110.

(16) One (1) Feed Storage Bin, identified as 8V122, constructed in 1966, loaded pneumatically, with emissions controlled by bin vent 8F2, and exhausting to stack 111.

(17) One (1) Feed Storage Bin, identified as 8V123, constructed in 1966, loaded pneumatically, with emissions controlled by bin vent 8F3, and exhausting to stack 112.

(18) One (1) Feed Storage Bin, identified as 8V124, constructed in 1966, loaded pneumatically, with emissions controlled by bin vent 8F4, and exhausting to stack 113.

(19) One (1) Meal Storage Bin, identified as 8V62, loaded pneumatically via Gluten Meal Pneumatic Transfer, identified as 21C15, constructed in 1966, with emissions controlled by bin vent 8F62, and exhausting to stack 114.

(20) One (1) Meal Storage Bin, identified as 8V63, loaded pneumatically via Gluten Meal Pneumatic Transfer, identified as 21C15, constructed in 1966, with emissions controlled by bin vent 8F63, and exhausting to stack 115.

(21) One (1) Germ Storage Bin, identified as 8V53, loaded pneumatically via Germ Pneumatic Transfer, identified as 21C404, constructed in 1966, with emissions controlled by bin vent 8F53, and exhausting to stack 116.

(22) One (1) Germ Storage Bin, identified as 8V54, loaded pneumatically via Germ Pneumatic Transfer, identified as 21C404, constructed in 1966, with emissions controlled by bin vent 8F54, and exhausting to stack 117.

(23) Two (2) Co-Product Loadout Conveyors, identified as 8U39 and 8U41, constructed in 1966, with emissions aspirated to Meal Storage Bin 8V62, and controlled by bin vent 8F62, and exhausting to stack 114.

(24) Two (2) Air Conveying Lines to Loadout, identified as AC23 and AC24, constructed in

1966, with emissions controlled by integral product receiver/baghouse 12F39, and exhausting to stack 125.

(25) One (1) Rail Loadout Conveyor, identified as 12U11, constructed in 1991, with emissions controlled by baghouse 12F40, and exhausting to stack 3.

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

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

D.3.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

Pursuant to 326 IAC 2-2-3:

(a) The following emission units shall be controlled for PM, PM_{10}, SO_2, VOC, and NO_x using the BACT:

(1) RST Feed Dryer (21D301) – BACT for PM, PM_{10}, SO_2, and VOC;

(2) Rotary Steam Tube Germ Dryer (21D401) – BACT for PM, PM_{10}, SO_2, and VOC;

(3) Gluten Flash Dryer (48D101) – BACT for PM, PM_{10}, SO_2, VOC, and NO_x;

(4) Fiber Flash Dryer (21D501) – BACT for PM, PM_{10}, SO_2, and VOC;

(5) Fiber Flash Dryer Furnace (21B501) – BACT for PM, PM_{10}, VOC, and NO_x;

(6) Feed Cooler (21D8) – BACT for PM and PM_{10};

(7) Corn Cleanings Receiver (21F304) – BACT for PM and PM_{10};

(8) Feed Loadout Hopper (21V125) – BACT for PM and PM_{10}; and

(9) Regenerative Thermal Oxidizers (48F201 and 48F202) – BACT for PM, PM_{10}, VOC, and NO_x.

(b) The following combined emission limits are established as BACT for the above dryers:

For these units, the BACT for PM and PM_{10} is the use of scrubbers 21F13 and 21F311 and thermal oxidizers 48F201 and 48F202. The following emission limits are the BACT requirements for PM and PM_{10}:

(1) PM emissions from the thermal oxidizers and the fiber dryer furnace shall not exceed 0.031 gr/dscf.

(2) PM_{10} (Filterable and Condensable) emissions from the thermal oxidizers and the fiber dryer furnace shall not exceed 0.031 gr/dscf.

(3) PM emissions from the thermal oxidizers and the fiber dryer furnace shall not exceed 7.38 lbs/hr.

(4) PM_{10} (Filterable and Condensable) emissions from the thermal oxidizers and the fiber dryer furnace shall not exceed 7.38 lbs/hr.

(5) Exhaust opacity of the combined gas flow from the thermal oxidizers and the fiber dryer furnace shall not exceed 8%.

(c) For these units, except the Fiber Flash Dryer Furnace 21B501, Feed Cooler 21D8, Corn Cleanings Receiver 21F304, and Feed Loadout Hopper 21V125, the BACT for SO_2 is the use of pH adjusted scrubber 21F13. The following emission limits are the BACT requirements for SO_2:

(1) When the inlet SO_2 concentration to the scrubber is more than 100 ppmvw, the scrubber shall have a minimum SO_2 control efficiency of 90%, and the scrubber outlet SO_2 emission rate shall not exceed 4.4 lbs/hr.

(2) When the inlet SO_2 concentration to the scrubber is 100 ppmvw or less, the scrubber shall have an outlet SO_2 concentration of 10 ppmvw or less, and the scrubber outlet SO_2 emission rate shall not exceed 4.4 lbs/hr.

(d) For these units, except the Fiber Flash Dryer Furnace 21B501, Feed Cooler 21D8, Corn Cleanings Receiver 21F304, and Feed Loadout Hopper 21V125, the BACT for VOC is the use of scrubber 21F13 followed by thermal oxidizers 48F201 and 48F202. The following emission limits are the BACT requirements for VOC:

(1) When the inlet VOC to the scrubber is more than 100 lbs/hr, the scrubber and thermal oxidizers shall have a minimum overall VOC control efficiency of 95%, and the outlet thermal oxidizer VOC emission rate shall not exceed 3.16 lbs/hr.

(2) When the inlet VOC rate to the scrubber is 100 lbs/hr or less, the thermal oxidizers shall have an outlet VOC concentration of less than 10 ppmvw and the outlet VOC emissions rate shall not exceed 3.16 lbs/hr.

(e) For Fiber Flash Dryer Furnace 21B501, the BACT for VOC is good combustion practices.

(f) For these units, including the Fiber Flash Dryer Furnace 21B501, Gluten Flash Dryer 48D101, and the regenerative thermal oxidizers 48F201 and 48F202, except the RST Feed Dryer 21D301, Rotary Steam Tube Germ Dryer 21D401, Fiber Flash Dryer 21D501, Feed Cooler 21D8, Corn Cleanings Receiver 21F304 and Feed Loadout Hopper 21V125, the BACT for NO_x is the use of low-NO_x burners rated at 0.06 lb/MMBtu or less, and the total NO_x emissions from these burners exhausting to stack S/V 17 shall not exceed 6 lbs/hr.

(g) The following emission units shall be controlled for PM and PM_{10} (Filterable and Condensable) using best available control technology (BACT):

(1) Feed Storage Bins 8V121, 8V123, 8V124;

(2) Meal Storage Bin 8V63;

(3) Germ Storage Bin 8V53; and

(4) Germ Storage Bin 8V54.

For these units, the BACT for PM and PM_{10} (Filterable and Condensable) is the use of baghouses and shall meet the following emissions limitations:

(1) PM and PM_{10} (Filterable and Condensable) emissions from the following baghouses shall not exceed:

Emission Unit	Baghouse	PM Limit (lb/hr)	PM_{10} Limit (lb/hr)
8V121	8F1	0.08	0.08
8V123	8F3	0.08	0.08
8V124	8F4	0.08	0.08
8V63	8F63	0.08	0.08
8V53	8F53	0.08	0.08
8V54	8F54	0.08	0.08

(2) PM emissions from each of the baghouses shall not exceed 0.005 gr/dscf.

(3) PM_{10} (Filterable and Condensable) emissions from each of the baghouses shall not exceed 0.005 gr/dscf.

(4) Opacity from the baghouses shall not exceed 3%.

(h) The following emission units shall be controlled for PM and PM_{10} (Filterable and Condensable) using best available control technology (BACT):

(1) Feed Mill 21G351,

(2) Feed Mill 21G352, and

(3) Feed Milling Loadout Conveyor 21U314.

For these units, the BACT for PM and PM_{10} (Filterable and Condensable) is the use of a wet scrubber, and:

(1) PM emissions from scrubber 21F312 shall not exceed 0.0089 gr/scf.

(2) PM_{10} (Filterable and Condensable) emissions from scrubber 21F312 shall not exceed 0.0089 gr/scf.

(3) PM emissions from scrubber 21F312 shall not exceed 0.204 lb/hr.

(4) PM_{10} (Filterable and Condensable) emissions from scrubber 21F312 shall not exceed 0.204 lb/hr.

(5) Opacity from the scrubber shall not exceed 8%.

D.3.2 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emissions Limitations for Sources of Indirect Heating), the allowable particulate matter (PM) emissions from fiber flash dryer furnace shall be limited to 0.20 lb/MMBtu. The above particulate emissions rate was determined from the following formula:

$P_t = 1.09 / Q^{0.26}$

Where:

P_t = Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input; and

Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used (Q = 666 MMBtu/hr).

D.3.3 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

The particulate emission rates from facilities AC8, 8V122, 8V62, 8U39, 8U41, AC23, AC24, and 12U11 shall be limited as follows:

(a) The particulate emission rate from baghouse 21F36 shall not exceed 0.86 lb/hr.

(b) The particulate emission rates from baghouses 8F2 and 8F62 shall not exceed 0.08 lb/hr, each.

(c) The particulate emission rate from baghouse 12F39 shall not exceed 0.21 lb/hr.

(d) The particulate emission rate from baghouse 12F40 shall not exceed 0.51 lb/hr.

These limits are more stringent than the 326 IAC 6-3-2 allowable particulate emission rates based on maximum process weight rate for these facilities. Therefore, compliance with these limits shall satisfy compliance with 326 IAC 6-3-2.

D.3.4 Volatile Organic Compounds (VOC) BACT [326 IAC 8-1-6] [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 and 326 IAC 8-1-6 as established in to PSD/SSM No. 157-18832-00003 and PSD/SSM 157-22808-00003:

(a) The following emission units shall be controlled for VOC using the BACT:

(1) RST Feed Dryer (21D301);

(2) Rotary Steam Tube Germ Dryer (21D401);

(3) Gluten Flash Dryer (48D101);

(4) Fiber Flash Dryer (21D501); and

(5) Regenerative Thermal Oxidizers (48F201 and 48F202).

(b) For these units, the BACT for VOC is the use of scrubber 21F13 followed by thermal oxidizers 48F201 and 48F202. The following emission limits are the BACT requirements for VOC:

(1) When the inlet VOC to the scrubber is more than 100 lbs/hr, the scrubber and thermal oxidizers shall have a minimum overall VOC control efficiency of 95% and the outlet thermal oxidizer VOC emission rate shall not exceed 3.16 lbs/hr.

(2) When the inlet VOC rate to the scrubber is 100 lbs/hr or less, the thermal oxidizers shall have an outlet VOC concentration of less than 10 ppmvw and the outlet VOC emission rate shall not exceed 3.16 lbs/hr.

Compliance with the above PSD BACT limits shall limit the potential emissions of VOC from emission unit 21D501 to less than 25 tons per year. Therefore, compliance with these 326 IAC 2-2-3 limits shall satisfy compliance with 326 IAC 8-1-6.

Compliance Determination Requirements

D.3.5 Particulate, Volatile Organic Compounds (VOC), and Sulfur Dioxide (SO_2) Control

In order to comply with Conditions D.3.1(b), D.3.1(c), and D.3.1(d), scrubber 21F13 and thermal oxidizers 48F201and 48F202 shall be in operation and control particulate, VOC, and SO_2 emissions from emission units 21D301, 21D401, 48D101, and 21D501 and insignificant activities 21U501 and 21J47 at all times when the material feed system to any emission unit that it controls is in operation.

D.3.6 Particulate Control

(a) In order to comply with Condition D.3.1(b), scrubber 21F311 shall be in operation and control particulate emissions from emission units 21F304, 21D8, and 21V125 and insignificant activities 21U315 and 21U201 and exhaust as combustion air into the furnace of Gluten Flash Dryer 48D101 and/or the Fiber Flash Dryer Furnace 21B501 and/or Thermal Oxidation Units 48F201 and 48F202 at all times when the material feed system to any emission unit that it controls is in operation.

(b) In order to comply with Conditions D.3.1(g) and D.3.3, bin vents 8F1, 8F2, 8F3, 8F4, 8F62, 8F63, 8F53, and 8F54 for particulate control shall be in operation and control particulate emissions from emission units 8V121, 8V122, 8V123, 8V124, 8V62, 8U39, 8U41, 8V63, 8V53, and 8V54 at all times when any emission unit that it controls is in operation.

(c) In order to comply with Condition D.3.1(h), scrubber 21F312 for particulate control shall be in operation and control particulate emissions from emission units 21G351, 21G352, and 21U314 and insignificant activity 21U313 at all times when any emission unit that it controls is in operation.

(d) In order to comply with Condition D.3.3, baghouses 21F36, 12F39, and 12F40 for particulate control shall be in operation and control particulate emissions from emission units AC8, AC23, AC24, and 12U11 at all times when any emission unit that it controls is in operation.

(e) In order to comply with Conditions D.3.1(b), D.3.1(c), and D.3.1(d), integral product collectors/cyclones 21F501 and 21F502 shall be in operation and control particulate emissions from emission unit 21D501 at all times when the material feed system to emission unit 21D501 is in operation.

(f) In order to comply with Conditions D.3.1(b), D.3.1(c), and D.3.1(d), integral product collectors/cyclones 48F101 and 48F102 shall be in operation and control particulate emissions from emission unit 48D101 at all times when the material feed system to emission unit 48D101 is in operation.

D.3.7 Broken or Failed Bag Detection – Single Compartment Baghouse

(a) For a single compartment baghouse controlling emissions from a process operated continuously, the feed to the 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), or

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

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

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

(a) In order to demonstrate compliance with Conditions D.3.1(b), D.3.1(c), and D.3.1(d), the Permittee shall perform PM, PM_{10}, opacity, VOC, and SO_2 testing of scrubber 21F13 and thermal oxidizers 48F201 and 48F202 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 obligations with regard to the performance testing required by this condition. PM_{10} includes filterable and condensable PM.

(b) In order to demonstrate compliance with Condition D.3.1(f), the Permittee shall perform NO_x testing of emission units 48D101, 48F201, 48F202, and 21B501 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 obligations with regard to the performance testing required by this condition.

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

D.3.9 Visible Emissions Notations

(a) Pursuant to 40 CFR 64 (CAM), visible emission notations of the exhaust from stack 17 shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) Visible emission notations of the exhausts from stacks 3, 110, 111, 112, 113, 114, 115, 116, 117, 125, 145, and 444 shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(c) 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.

(d) 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.

(e) 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.

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

D.3.10 Scrubber Parametric Monitoring

(a) Pursuant to 40 CFR 64 (CAM), the Permittee shall monitor and record the pH across scrubber 21F13 at least once per day when any of the emission units 21D501, 21D301, 48D101, and 21D401 are in operation.

(1) When, for any one reading, the pH across the scrubber is outside ~~of~~ the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pH between 5.5 and 7.5 unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. A pH reading that is outside the above mentioned range is not a deviation from this permit.

(2) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A pH reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) Pursuant to 40 CFR 64 (CAM), the Permittee shall monitor and record the recirculation rate from scrubber 21F13 at least once per day during normal operations the emission units 21D501, 21D301, 48D101, and 21D401 are in operation.

(1) From the date of startup until the stack test results are available, the Permittee shall maintain the flow rate at or above the minimum of 400 gallons per minute. If the flow rate falls below 400 gallons per minute, the Permittee shall take a reasonable response.

(2) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Condition D.3.1.

(3) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate as observed during the latest compliant stack test. If the flow rate falls below the level observed during the latest compliant stack test, the Permittee shall take a reasonable response.

(4) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A flow rate 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.

(c) The Permittee shall monitor and record the recirculation rate from scrubber 21F311 at least once per day when any of the emission units 21F304, 21D8, and 21V125 are in operation.

(1) From the date of startup until the stack test results are available, the Permittee shall maintain the flow rate at or above the minimum flow rate as specified by the manufacturer. If the 1-hr average flow rate falls below the minimum flow rate as specified by the manufacturer, the Permittee shall take a reasonable response.

(2) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Condition D.3.1.

(3) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate as observed during the latest compliant stack test. If the flow rate falls below the level observed during the latest compliant stack test, the Permittee shall take a reasonable response.

(4) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A flow

rate reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(d) The Permittee shall monitor and record the scrubber recirculation rate from scrubber 21F312 at least once per day when any of the emission units 21G351, 21G352, and 21U314 are in operation.

(1) From the date of startup until the stack test results are available, the Permittee shall maintain the flow rate at or above the minimum flow rate as specified by the manufacturer. If the 1-hr average flow rate falls below the minimum flow rate as specified by the manufacturer, the Permittee shall take a reasonable response.

(2) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Condition D.3.1(h).

(3) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate as observed during the latest compliant stack test. If the flow rate falls below the level observed during the latest compliant stack test, the Permittee shall take a reasonable response.

(4) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A flow rate 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.

(e) The instruments used for determining the pH and flow rate shall comply with Section C - Instrument Specifications of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer's specifications, if used.

D.3.11 Scrubber Failure Detection

In the event that scrubber failure for the emission units being aspirated to scrubbers 21F13, 21F311, and/or 21F312 has been observed:

The feed to the process shall be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the 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).

D.3.12 Thermal Oxidizer Temperature

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

(b) The Permittee shall operate the thermal oxidizer at or above the 3-hour average temperature of 1400°F. If the 3-hour average temperature falls below 1,400°F, the Permittee shall take a reasonable response.

(c) The Permittee shall determine the 3-hour average temperature from the latest valid stack test that demonstrates compliance with the limits in Condition D.3.1(d).

(d) 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. If the 3-hour average temperature falls below the level observed during the most recent compliant stack test, the Permittee shall take a reasonable response.

(e) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A 3-hr average that is below the established temperature is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.3.13 Broken or Failed Bag Detection – Multi-Compartment Baghouse

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

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

D.3.14 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.9, the Permittee shall maintain a daily record of visible emission notations of stacks 3, 17, 110, 111, 112, 113, 114, 115, 116, 117, 125, 145, and 444 controlling the Feed/Meal/Germ Production exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(b) To document the compliance status with Condition D.3.10(a), the Permittee shall maintain a daily record of the pH and scrubber recirculation rate from scrubber 21F13 controlling the Feed/Meal/Germ Production exhaust. The Permittee shall include in its daily record when a pH or scrubber recirculation rate reading is not taken and the reason for the lack of a pH or scrubber recirculation rate reading (e.g. the process did not operate that day).

(c) To document the compliance status with Conditions D.3.10(b) and D.3.10(c), the Permittee shall maintain a daily record of the scrubber recirculation rates from scrubbers 21F311 and 21F312 controlling the Feed/Meal/Germ Production exhaust. The Permittee shall include in its daily record when a scrubber recirculation rate reading is not taken and the reason for the lack of a scrubber recirculation rate reading (e.g. the process did not operate that day).

(d) To document the compliance status with Condition D.3.12, the Permittee shall maintain records of the operating temperatures of thermal oxidizers 48F201 and 48F202.

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

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(d) Syrup Refining Operations, consisting of:

(1) One (1) HCl Storage Tank (Concentrated), identified as 9V101, constructed in 1995, with emissions controlled by scrubber 9F102, and exhausting to stack 156.

(2) One (1) Acid Reject Flash Chamber, identified as 18V312, constructed in 1966, with emissions uncontrolled, and exhausting to stack 320.

(3) One (1) Jet Conversion Flash Chamber, identified as 18V413, constructed in 1966 and approved in 2011 for the production of OS starches, with SO_2 and VOC emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17 (see Section D.2 for the control device monitoring requirements).

(4) One (1) Jet Conversion Flash Chamber, identified as 18V513, approved in 2014 for construction, for the production of Maltodextrin, with SO_2 and VOC emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17 (see Section D.2 for the control device monitoring requirements).

(5) One (1) Soda Ash Storage Tank, identified as 9V144, loaded pneumatically via Soda Ash Unloading System, identified as 9C40, constructed in 1966, with emissions controlled by eductor/scrubber 9E1, and exhausting to stack 149.

(6) One (1) Filteraid Storage Silo, identified as 9V31, loaded pneumatically via Filteraid Unloading System, identified as 9C31, constructed in 1966, with emissions controlled by bin vent 9F31, and exhausting to stack 123.

(7) One (1) Filteraid Conveying System to Precoat Makeup Tank, identified 18C18, constructed in 1966, with emissions controlled by integral product receiver/baghouse 18F118, and exhausting to stack 129.

(8) One (1) Powdered Carbon Storage Silo, identified as 9V30, loaded pneumatically via Powdered Carbon Unloading System, identified as 9C30, constructed in 1966, with emissions controlled by bin vent filter 09F30, and exhausting to stack 124.

(9) One (1) Powdered Carbon Transfer System, identified as 18C101, approved in 2014 for construction, with emissions controlled by Powdered Carbon Transfer Receiver/Baghouse, identified as 18F101 and exhausting through stack 462. The Powdered Carbon Transfer Receiver/Baghouse is installed to pneumatically transfer carbon from the Powdered Carbon Storage Silo, identified as 9V30, to the precoat vacuum filters.

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

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

D.4.1 Prevention of Significant Deterioration (PSD) Minor Limit SO_2, VOC, PM, PM_{10}, $PM_{2.5}$ [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable to the 2014 modification, the Permittee shall comply with the following:

(a) The SO_2 emissions from the Jet Conversion Flash Chamber, identified as 18V513, shall not exceed 1.65 pounds per hour.

(b) The VOC emissions from the Jet Conversion Flash Chamber, identified as 18V513, shall not exceed 0.75 pounds per hour.

(c) The PM emissions from the Powdered Carbon Transfer system shall not exceed 0.004 pounds per hour.

(d) The total PM_{10} emissions from the Powdered Carbon Transfer system shall not exceed 0.004 pounds per hour.

(e) The total $PM_{2.5}$ emissions from the Powdered Carbon Transfer system shall not exceed 0.002 pounds per hour.

Compliance with these limits, in combination with the limits in Conditions D.2.2, D.5.2, D.7.3, D.8.3 and D.9.2, shall limit the net emissions increase from the 2014 modification to less than twenty-five (25) tons PM, fifteen (15) tons PM_{10}, ten (10) tons $PM_{2.5}$, forty (40) tons SO_2, forty (40) tons NOx, forty (40) tons VOC, and one-hundred (100) tons CO per twelve consecutive month period, and therefore, render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2014 modification.

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

The particulate emission rates from facilities 9V31, 9V30, 18C18, 9V144, and 18F101, shall be limited as follows:

(a) The particulate emission rate from bin vent 9F31 shall not exceed 0.03 lb/hr.

(b) The particulate emission rate from bin vent filter 09F30 shall not exceed 0.03 lb/hr.

(c) The particulate emission rate from baghouse 18F118 shall not exceed 0.03 lb/hr.

(d) The particulate emission rate from eductor/scrubber 9E1 shall not exceed 0.27 lb/hr.

(e) The particulate emission rate from receiver/baghouse 18F101 shall not exceed 0.004 lb/hr.

These limits are more stringent than the 326 IAC 6-3-2 allowable particulate emission rates based on maximum process weight rate for these facilities. Therefore, compliance with these limits shall satisfy compliance with 326 IAC 6-3-2.

Compliance Determination Requirements

D.4.3 Particulate, SO_2 and VOC Control [326 IAC 2-7-6(6)]

(a) In order to comply with Condition D.4.2(a), bin vent 9F31 shall be in operation and control particulate emissions from emission unit 9V31 at all times emission unit 9V31 is in operation.

(b) In order to comply with Condition D.4.2(b), baghouse 9F30 shall be in operation and control particulate emissions from emission unit 9V30 at all times emission unit 9V30 is in operation.

(c) In order to comply with Condition D.4.2(c), baghouse 18F118 shall be in operation and control particulate emissions from emission unit 18C18 at all times emission unit 18C18 is in operation.

(d) In order to comply with Condition D.4.2(d), eductor/scrubber 9E1 shall be in operation and control particulate emissions from emission unit 9V144 at all times emission unit 9V144 is being loaded.

(e) In order to comply with Condition D.4.1(a) and (b), scrubber 15F401 (Section D.2) shall be in operation and control VOC and SO_2 emissions from emission unit 18V513 at all times emission unit 18V513 is in operation.

(f) In order to comply with Condition D.4.1(c), (d), and (e), receiver/baghouse 18F101 shall be in operation and control particulate emissions from emission unit 18C101 at all times emission unit 18C101 is in operation.

D.4.4 Broken or Failed Bag Detection – Single Compartment Baghouse

(a) For a single compartment baghouse controlling emissions from a process operated continuously, the feed to the 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), or

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

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

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

(a) In order to demonstrate compliance Condition D.4.1, not later than 180 days after the startup of the Jet Conversion Flash Chamber, identified as 18V513, the Gluten Vacuum Filter (ID 21F5), the Gluten Filter Vacuum Pump (ID 21C105), and the Grit Separator Screens (IDs 15J39 and 15J40), the Permittee shall perform SO_2 and VOC testing of scrubber 15F401 (Section D.2) utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

(b) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

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

D.4.6 Visible Emissions Notations

(a) Visible emission notations of the stacks' 123, 124, and 149 exhausts shall be performed once per day during normal daylight operations when rail or truck unloading operations occur. A trained employee shall record whether emissions are normal or abnormal.

(b) Visible emission notations of the stacks 129 and 462 exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(c) 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.

(d) 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.

(e) 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.

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

D.4.7 Eductor/Scrubber Parametric Monitoring

The Permittee shall make a visible observation for the presence of scrubber recirculation flow each time that soda ash is unloaded through eductor/scrubber 9E1 controlling emissions from facility 9C40. If an inadequate scrubber recirculation flow is observed, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A reading that is outside the normal range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.4.8 Eductor/Scrubber Failure Detection

In the event that scrubber failure for the emission units being aspirated to scrubber 9E1 has been observed:

The feed to the process shall be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the 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).

D.4.9 Broken or Failed Bag Detection – Multi-Compartment Baghouse

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

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

D.4.10 Record Keeping Requirements

(a) To document the compliance status with Condition D.4.6, the Permittee shall maintain a daily record of visible emission notations of stacks 123, 124, 129, 149, and 462 controlling the Syrup Refining Operation exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(b) To document the compliance status with Condition D.4.7, the Permittee shall maintain observations of scrubber recirculation flow each time soda ash is unloaded from the scrubbers controlling emissions from facility 9C40.

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

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(e) Starch Modification Operations, consisting of:

(1) One (1) Non-PO Reactor/Oxidized Starch Reactor, identified as 45V115, constructed in 1966 and approved in 2010 for modification, with emissions uncontrolled, and exhausting to stack 11.

(2) One (1) Non-PO Reactor/Oxidized Starch Reactor, identified as 45V116, constructed in 1966 and approved in 2010 for modification, with emissions uncontrolled, and exhausting to stack 12.

(3) One (1) Non-PO Reactor/Oxidized Starch Reactor, identified as 45V222, constructed in 1973 and approved in 2010 for modification, with emissions uncontrolled, and exhausting to stack 31.

(4) One (1) PO Reactor, identified as 45V223, constructed in 1973, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(5) One (1) PO Reactor, identified as 45V240, constructed in 1986, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(6) One (1) PO Reactor, identified as 45V241, constructed in 1986, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(7) One (1) PO Reactor, identified as 45V242, constructed in 1986, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(8) One (1) PO Reactor, identified as 45V243, constructed in 1986, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(9) One (1) PO Reactor,l identified as 45V246, constructed in 1988, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(10) One (1) PO Reactor, identified as 45V247, constructed in 1988, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(11) One (1) PO Reactor, identified as 45V248, constructed in 1991, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(12) One (1) PO Reactor, identified as 45V270, constructed in 1995, with emissions controlled by scrubber 45F212, exhausting to stack 50.

(13) One (1) PO Reactor, identified as 45V271, constructed in 1995, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(14) One (1) PO Reactor, identified as 45V280, constructed in 2002, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(15) One (1) PO Reactor, identified as 45V281, constructed in 2002, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(16) Five (5) Propylated Starch Reactors, identified as 45V292, 45V293, 45V294, 45V295,

and 45V296, constructed in 2007, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(17) One (1) Propylated Starch Reactor, identified as 45V298, approved in 2014 for construction, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(18) One (1) Propylated Starch Reactor, identified as 45V299, approved in 2014 for construction, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(19) One (1) Oxidized Starch Reactor, identified as 18V173, constructed in 1994 and approved in 2009 for modification and approved in 2010 for modification, with emissions uncontrolled, and exhausting to stack 41.

(20) One (1) Oxidized Starch Reactor, identified as 18V178, constructed in 1994 and approved in 2009 for modification and approved in 2010 for modification, with emissions uncontrolled, and exhausting to stack 43.

(21) One (1) Oxidized Starch Reactor, identified as 18V274, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack 455.

(22) One (1) Oxidized Starch Reactor, identified as 18V174, constructed in 1994 and approved in 2010 for modification, with emissions uncontrolled, and exhausting to stack 41.

(23) One (1) Oxidized Starch Reactor, identified as 18V175, constructed in 1994 and approved in 2010 for modification, with emissions uncontrolled, and exhausting to stack 43.

(24) One (1) Tri-Polyphosphate Storage Bin, identified as 9V103, constructed in 1988, with emissions controlled by bin vent 9F103, and exhausting to stack 68.

(25) One (1) Sodium Sulfate Storage Bin, identified as 45V250, loaded pneumatically via Sodium Sulfate Unloading System, identified as 09C200 and 09F200, constructed in 1985, with emissions controlled by two bin vents, 45F25 and 45F25A, and exhausting to stack 64.

(26) One (1) Flash 1 Filtrate Reineveldt Centrifuge, identified as 40Y1, constructed in 1985, with emissions uncontrolled, and exhausting to stack 315.

(27) One (1) Flash 1 Slurry Hold Tank, identified as 40V1, constructed in 1985, with emissions uncontrolled, and exhausting to stack 315.

(28) One (1) Flash 1 Starch Hold Tank, identified as 40V50, constructed in 1996, with emissions uncontrolled, and exhausting to stack 289.

(29) One (1) Dryer Starch Feed Conveyor/Flash 1 Paddle Mixer, identified as 40U2, constructed in 1985, with emissions uncontrolled, and exhausting to stack 315.

(30) Two (2) Flash 2 Slurry Hold Tanks, identified as 40V20 and 40V21, constructed in 1990, with emissions uncontrolled, and exhausting to stack 80.

(31) Three (3) Flash 2 Larox Filters, identified as 40F51, 40F52, and 40F53, constructed in 1995, with emissions uncontrolled, and exhausting to stack 249.

(32) One (1) Flash 2 Larox Filter, identified as 40F54, constructed in 2002, with emissions uncontrolled, and exhausting to stack 249.

(33) One (1) Flash 2 Air Release Tank, identified as 40V15, constructed in 1995, with emissions uncontrolled, and exhausting to stack 250.

(34) One (1) Flash 2 Air Release Tank, identified as 40V16, constructed in 2002, with emissions uncontrolled, exhausting to stack 251.

(35) One (1) Dryer Starch Feed Conveyor/Flash 2 Paddle Mixer, identified as 40U23, constructed in 1995, with emissions uncontrolled, exhausting to stack 249.

(36) Two (2) Flash 3 Slurry Hold Tanks, identified as 43V71 and 43V72, constructed in 1995, with emissions uncontrolled, and exhausting to stack 273.

(37) Three (3) Flash 3 Larox Filters, identified as 43F71, 43F72, and 43F73, constructed in 1995, with emissions uncontrolled, and exhausting to stack 260.

(38) One (1) Flash 3 Larox Air Release Tank, identified as 43V85, constructed in 1995, with emissions uncontrolled, and exhausting to stack 261.

(39) One (1) Flash 3 Larox Air Release Tank, identified as 43V86, constructed in 1995, with emissions uncontrolled, and exhausting to stack 318.

(40) One (1) Flash 4 Slurry Hold Tank, identified as 54V401, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, and exhausting to stack 419.

(41) One (1) Flash 4 Larox Filter Feed Tank, identified as 54V403, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, and exhausting to stack 420.

(42) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F421/54V421, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, and exhausting to stack 421.

(43) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F422/54V422, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, and exhausting to stack 422.

(44) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F4MM/54V4MM, approved in 2014 for construction with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, and exhausting to stack 423.

(45) Two (2) Spray Dryer 1 Feed Tanks, identified as 30V1 and 30V2, constructed in 1986, with emissions uncontrolled, and exhausting to stack 195.

(46) Three (3) Spray Dryer 1 Process Tanks, identified as 40V11, 40V12, and 40V14, constructed in 1988, with emissions uncontrolled, and exhausting to stack 222.

(47) One (1) Spray Dryer 2 Feed Tank, identified as 46V297, constructed in 2006, with emissions uncontrolled, and exhausting to stack 434.

(48) One (1) Spray Dryer 2 Sweco Tank, identified as 46V201, constructed in 2006, with emissions uncontrolled, and exhausting to stack 436.

(49) One (1) Spray Dryer 2 Waste Surge Tank, identified as 46V213, constructed in 2006, with emissions uncontrolled, and exhausting to stack 424.

(50) One (1) Spray Dryer 2 Under Flow Tank, identified as 46V204, constructed in 2006, with emissions uncontrolled, and exhausting to stack 435.

(51) Four (4) Belt Dryer Feed Tanks, identified as 45V117 through 45V120, constructed in 1966, with emissions uncontrolled, and exhausting to stack 180.

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

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

D.5.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

Pursuant to 326 IAC 2-2-3, the following emission units shall be controlled for VOC using BACT:

Propylated Starch Reactors, identified as 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, and 45V296.

VOC BACT has been determined to be the use of a low pH packed bed scrubber (45F212) and hydrolysis and:

(1) A VOC emission rate of 3.25 lb per 100,000 lb of acid-killed starch and 6.0 lb per 100,000 lbs of non-acid-killed starch for Propylene Oxide Starch Reactors (equivalent to minimum 95% overall control efficiency).

(2) The combined propylene oxide input to Starch Modification Operations 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, 45V296, 40Y1, 40V1, 40V50, 40U2, 40V20, 40V21, 40F51, 40F52, 40F53, 40F54, 40V15, 40V16, 40U23, 43V71, 43V72, 43F71, 43F72, 43F73, 43V85, 43V86, 30V1, 30V2, 40V11, 40V12, 40V14, 46V297, 46V201, 46V213, 46V204, 45V117, 45V118, 45V119, 45V120; and Starch Drying and Handling Operations 40D1, 40D20, 43D71, 41D1, 41D2, 41D3, 41D4, 41D5, 41D6, 41D7, 41D8, 30D1, 16D4, 46D200, 19D301, 19D302, and 19D303 shall not exceed 1,500 tons per twelve consecutive month period for propylated starch reactions that do not undergo the acid-kill step.

D.5.2 Prevention of Significant Deterioration (PSD) Minor Limit SO_2, VOC [326 IAC 2-2]

(a) Pursuant to 157-30564-00003, and in order to render the requirements of 326 IAC 2-2 not applicable, the Permittee shall comply with the following:

(1) The amount of acid-thinned starch produced without peroxide from reactors 45V115, 45V116, and 45V222 shall be limited to fifty million (50,000,000) pounds per twelve (12) consecutive month period with compliance determined at the end of each month.

(2) The sulfur dioxide (SO_2) emission rate from reactors 45V115, 45V116, and 45V222 shall not exceed 43 pounds SO_2 per 100,000 pounds of acid-thinned starch, combined.

Compliance with the above limits shall render the requirements of 326 IAC 2-2 not applicable to emission units 45V115, 45V116, and 45V222.

(b) In order to render the requirements of 326 IAC 2-2 (PSD) not applicable to the 2014 modification, the Permittee shall comply with the following:

(1) T<u>wo (2) Propylated Starch Reactors, identified as 45V298 and 45V299, controlled by scrubber 45F212</u>

(A) The combined throughput to the two Propylated Starch Reactors shall be limited to a total of 60 million pounds of propylated starch per twelve (12) consecutive month period with compliance determined at the end of each month.

(B) A VOC emission rate of 3.25 lb per 100,000 lb of acid-killed starch and 6.0 lb per 100,000 lbs of non-acid-killed starch for Propylene Oxide Starch Reactors.

(C) The amount of propylene oxide used in propylated starch reactions that do not undergo the 'acid kill step' shall be limited to 4.0 million pounds per twelve (12) consecutive month period with compliance determined at the end of each month.

(2) The VOC emissions from Oxidized Starch Reactor, identified as 18V274

(A) The amount of oxidized starch produced from reactor 18V274 shall be limited to forty-eight point seven million (48,700,000) pounds per twelve (12) consecutive month period with compliance determined at the end of each month.

(B) The VOC emission rate from reactor 18V274 shall not exceed 42.7 pounds VOC per 100,000 pounds of oxidized starch.

Compliance with these limits, in combination with the limits in Conditions D.2.2, D.4.1, D.5.2, D.7.3, D.8.3 and D.9.2, shall limit the net emissions increase from the 2014 modification to less than twenty-five (25) tons PM, fifteen (15) tons PM_{10}, ten (10) tons $PM_{2.5}$, forty (40) tons SO_2, forty (40) tons NO_X, forty (40) tons VOC, and one-hundred (100) tons CO per twelve consecutive month period, and therefore, render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2014 modification.

D.5.3 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

The particulate emission rates from facilities 45V250 and 9V103 shall be limited as follows:

(a) The particulate emission rates from bin vents 45F25 and 45F25A shall not exceed 0.13 lb/hr, combined.

(b) The particulate emission rate from bin vent 9F103 shall not exceed 0.04 lb/hr.

These limits are more stringent than the 326 IAC 6-3-2 allowable particulate emission rates based on maximum process weight rate for these facilities. Therefore, compliance with these limits shall satisfy compliance with 326 IAC 6-3-2.

D.5.4 Volatile Organic Compounds (VOC) BACT [326 IAC 8-1-6] [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 and 326 IAC 8-1-6 as established in to PSD/SSM No. 157-18832-00003 and PSD/SSM 157-22808-00003, the following emission units shall be controlled for VOC using BACT:

Propylated Starch Reactors, identified as 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, and 45V296.

VOC BACT has been determined to be the use of a low pH packed bed scrubber (45F212) and hydrolysis and

(a) A VOC emission rate of 3.25 lb per 100,000 lb of acid-killed starch and 6.0 lb per 100,000 lbs of non-acid-killed starch for Propylene Oxide Starch Reactors (equivalent to minimum 95% overall control efficiency).

(b) The combined propylene oxide input to Starch Modification Operations 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, 45V296, 40Y1, 40V1, 40V50, 40U2, 40V20, 40V21, 40F51, 40F52, 40F53, 40F54, 40V15, 40V16, 40U23, 43V71, 43V72, 43F71, 43F72, 43F73, 43V85, 43V86, 30V1, 30V2, 40V11, 40V12, 40V14, 46V297, 46V201, 46V213, 46V204, 45V117, 45V118, 45V119, 45V120; and Starch Drying and Handling Operations 40D1, 40D20, 43D71, 41D1, 41D2, 41D3, 41D4, 41D5, 41D6, 41D7, 41D8, 30D1, 16D4, 46D200, 19D301, 19D302, and 19D303 shall not exceed 1,500 tons per twelve consecutive month period for propylated starch reactions that do not undergo the acid-kill step.

D.5.5 Avoidance Limits for HAPs [326 IAC 2-4.1]

In order to render the requirements of 326 IAC 2-4.1 not applicable, the Permittee shall comply with the following BACT requirements, pursuant to 326 IAC 2-2-3 and 326 IAC 8-1-6 as established in PSD/SSM No. 157-18832-00003 and PSD/SSM 157-22808-00003:

The following emission units shall be controlled for VOC using BACT:

Propylated Starch Reactors, identified as 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, and 45V296.

VOC BACT has been determined to be the use of a low pH packed bed scrubber (45F212) and hydrolysis and:

(a) A VOC emission rate of 3.25 lb per 100,000 lb of acid-killed starch and 6.0 lb per 100,000 lbs of non-acid-killed starch for Propylene Oxide Starch Reactors (equivalent to minimum 95% overall control efficiency).

(b) The combined propylene oxide input to Starch Modification Operations 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, 45V296, 40Y1, 40V1, 40V50, 40U2, 40V20, 40V21, 40F51, 40F52, 40F53, 40F54, 40V15, 40V16, 40U23, 43V71, 43V72, 43F71, 43F72, 43F73, 43V85, 43V86, 30V1, 30V2, 40V11, 40V12, 40V14, 46V297, 46V201, 46V213, 46V204, 45V117, 45V118, 45V119, 45V120; and Starch Drying and Handling

Operations 40D1, 40D20, 43D71, 41D1, 41D2, 41D3, 41D4, 41D5, 41D6, 41D7, 41D8, 30D1, 16D4, 46D200, 19D301, 19D302, and 19D303 shall not exceed 1,500 tons per twelve consecutive month period for propylated starch reactions that do not undergo the acid-kill step.

Compliance with these limits will render the requirements of 326 IAC 2-4.1 not applicable to emission units 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, and 45V296.

Compliance Determination Requirements

D.5.6 Volatile Organic Compounds (VOC) and Hazardous Air Pollutant (HAP) Control

In order to comply with Conditions D.5.1, D.5.2, D.5.4, and D.5.5, scrubber 45F212 shall be in operation and control VOC and HAP emissions from emission units 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, 45V296, 45V298, and 45V299 at all times any of those emission units are in operation.

D.5.7 Particulate Control

In order to comply with Condition D.5.3, bin vents 45F25, 45F25A, and 9F103 for particulate control shall be in operation and control particulate emissions at all times when an emission unit that it controls is in operation.

D.5.8 Broken or Failed Bag Detection – Single Compartment Baghouse

(a) For a single compartment baghouse controlling emissions from a process operated continuously, the feed to the 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), or

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

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

D.5.9 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.5.1, D.5.4, and D.5.5, the Permittee shall perform VOC testing of scrubber 45F212 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration.

(b) No later than 180 from the startup of Propylated Starch Reactors (45V298 and 45V299), in order to demonstrate compliance with Conditions D.5.1, D.5.2(b)(1), D.5.4, and D.5.5, the Permittee shall perform VOC testing of scrubber 45F212 utilizing methods as approved by the Commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

(c) No later than 180 from the startup of Oxidized Starch Reactor, identified as 18V274, in order to demonstrate compliance with Condition D.5.2(b)(2), the Permittee shall perform

VOC testing of stack 455 utilizing methods as approved by the Commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

(d) 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 obligations with regard to the performance testing required by this condition.

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

D.5.10 Visible Emissions Notations

(a) Visible emission notations of the stacks' 64 and 68 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. 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.5.11 Scrubber Parametric Monitoring [40 CFR 64]

(a) The Permittee shall monitor and record the pH across scrubber 45F212 at least once per day when any of the emission units being aspirated to scrubber 45F212 are in operation.

(1) When, for any one reading, the pH across the scrubber is outside of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pH between 0.5 and 4 unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. A pH reading that is outside the above mentioned range is not a deviation from this permit.

(2) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A pH reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) The Permittee shall monitor and record monitor the recirculation rate from scrubber 45F212 continuously when any of the emission units being aspirated to scrubber 45F212 are in operation.

(1) From the date of startup until the stack test results are available, the Permittee shall maintain the flow rate at or above the minimum of 390 gallons per minute. If the 1-hr average flow rate falls below 390 gallons per minute, the Permittee

shall take a reasonable response.

(2) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Conditions D.5.1, D.5.4, and D.5.5.

(3) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate as observed during the latest compliant stack test. If the flow rate falls below the level observed during the latest compliant stack test, the Permittee shall take a reasonable response.

(4) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A flow rate 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.

(c) The instruments used for determining the pH and flow rate shall comply with Section C - Instrument Specifications of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer's specifications, if used.

D.5.12 Scrubber Failure Detection

In the event that scrubber failure for the emission units being aspirated to scrubber 45F212 has been observed:

The feed to the process shall be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the 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).

D.5.13 Broken or Failed Bag Detection – Multi-Compartment Baghouse

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

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

D.5.14 Record Keeping Requirements

(a) To document the compliance status with Conditions D.5.1, D.5.4, and D.5.5, the Permittee shall maintain monthly records for propylated starch reactions that do not undergo the acid-kill step to Starch Modification Operations 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, 45V296, 40Y1, 40V1, 40V50, 40U2, 40V20, 40V21, 40F51, 40F52, 40F53, 40F54, 40V15, 40V16, 40U23, 43V71, 43V72, 43F71, 43F72, 43F73, 43V85, 43V86, 30V1, 30V2, 40V11, 40V12, 40V14, 46V297, 46V201, 46V213, 46V204, 45V117, 45V118, 45V119, 45V120; and Starch Drying and Handling Operations 40D1, 40D20, 43D71, 41D1, 41D2, 41D3, 41D4, 41D5, 41D6, 41D7, 41D8, 30D1, 16D4, 46D200, 19D301, 19D302, and 19D303.

Note that this record is the same record as required in Condition D.7.14(a).

(b) To document the compliance status with Condition D.5.1(a) and D.5.2(b)(2) the Permittee shall maintain monthly records of the amount of acid-thinned starch produced without peroxide from reactors 45V115, 45V116, and 45V222 and the amount of oxidized starch produced from reactor 18V274.

(c) To document the compliance status with Condition D.5.10, the Permittee shall maintain a daily record of visible emission notations of stacks 64 and 68 controlling the Starch Modification Operation exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(d) To document the compliance status with Condition D.5.11, the Permittee shall maintain a daily record of:

(1) The pH across scrubber 45F212 controlling the Starch Modification Operation exhaust. The Permittee shall include in its daily record when a pH reading is not taken and the reason for the lack of a pH reading (e.g. the process did not operate that day).

(2) The scrubber recirculation rate, as read by the continuous monitor, from scrubber 45F212 controlling the Starch Modification Operation exhaust. The Permittee shall include in its daily record when a scrubber recirculation rate reading is not taken and the reason for the lack of a scrubber recirculation rate reading (e.g. the process did not operate that day).

(e) To document the compliance status with condition D.5.2(b)(1), the Permittee shall maintain monthly record of:

(1) The total throughput of the propylated starch to the two Propylated Starch Reactors, identified as 45V298 and 45V299.

(2) The amount of propylene oxide used in propylated starch reactions that do not undergo the 'acid kill step' in the Propylated Starch Reactors, identified as 45V298 and 45V299.

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

D.5.15 Reporting Requirements

(a) A quarterly report of the total throughput of the propylated starch to the two propylated starch reactors, identified as 45V298 and 45V299 to document the compliance status with Conditions D.5.2(b) shall be submitted not later than thirty (30) days after the end of the quarter being reported.

(b) A quarterly report of the amount of propylene oxide used in propylated starch reactions that do not undergo the 'acid kill step' in the Propylated Starch Reactors, identified as 45V298 and 45V299 to document the compliance status with Conditions D.5.2(b) shall be submitted not later than thirty (30) days after the end of the quarter being reported.

(c) 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

Emissions Unit Description:

(f) Starch Reaction Operations, consisting of:

(1) One (1) Starch Feed Bin, identified as 33V1, constructed in 1995, with emissions controlled by bin vent 33F1, and exhausting via vent 236 to stack 355.

(2) One (1) Starch Feed Bin, identified as 33V2, constructed in 1995, with emissions controlled by bin vent 33F2, and exhausting via vent 237 to stack 355.

(3) One (1) Catalyst Bin, identified as 33V5, constructed in 1995, with emissions controlled by bin vent 33F5, and exhausting to stack 239.

(4) One (1) Low Pressure Dry Starch Reactor, identified as 33R1, constructed in 1995, with emissions controlled by baghouses 33F101 and 33F102, and exhausting to stack 238.

(5) One (1) High Pressure Dry Starch Reactor, identified as 33R2, constructed in 1995, with emissions controlled by baghouses 33F201 and 33F202, and exhausting to stack 240.

(6) One (1) Reactor Surge Bin, identified as 50V61, loaded pneumatically via Pneumatic Conveyor, identified as 33C8, constructed in 1997, with emissions controlled by bin vent 50F161, and exhausting via vent 241 to stack 361.

(7) One (1) Reactor Surge Bin, identified as 50V62, loaded pneumatically via Pneumatic Conveyor, identified as 33C4, constructed in 1997, with emissions controlled by bin vent 50F162, and exhausting via vent 242 to stack 361.

(8) One (1) Dry Starch Product Screening Receiver, identified as 50F45, constructed in 1995, with emissions controlled by integral product receiver/baghouse 50F45, and exhausting via vent 262 to stack 355.

(9) One (1) Dry Starch Product Screening Receiver, identified as 50F48, constructed in 1997, with emissions controlled by integral product receiver/baghouse 50F48, and exhausting via vent 243 to stack 355.

(10) One (1) Reactor 2 Mill, identified as 50G1, constructed in 1995, permitted in 2011, with emissions controlled by baghouse 50F48, and exhausting via vent 243 to stack 355.

(11) One (1) Dry Starch Blend Bin, identified as 33V42, loaded pneumatically via Pneumatic Conveyors, identified as 50C47 and 50C46, constructed in 1995, with emissions controlled by bin vent 33F42, and exhausting via vent 244 to stack 355.

(12) One (1) Dry Starch Blend Bin, identified as 33V43, loaded pneumatically via Pneumatic Conveyors, identified as 50C47 and 50C46, constructed in 1995, with emissions controlled by bin vent 33F43, and exhausting via vent 245 to stack 355.

(13) One (1) Dry Starch Blend Bin, identified as 33V40, loaded pneumatically via Pneumatic Conveyors, identified as 50C47 and Blower 33C65, constructed in 1995, with emissions controlled by bin vent 33F40, and exhausting via vent 246 to stack 355.

(14) One (1) Dry Starch Blend Bin, identified as 33V41, loaded pneumatically via

Pneumatic Conveyors, identified as 50C47 and Blower 33C65, constructed in 1995, with emissions controlled by bin vent 33F41, and exhausting via vent 247 to stack 355.

(15) One (1) Additives Mill, identified as 50G2, constructed in 1995, permitted in 2011, with emissions aspirated to the intakes of Bins 33V42, 33V43, 33V40, and 33V41.

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

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

D.6.1 Avoidance Limits for PSD [326 IAC 2-2] [326 IAC 6-3-2]

(a) In order to render the requirements of 326 IAC 2-2 not applicable, PM and PM_{10} emissions from emission units 33V1, 33V2, 33R1, 33V5, 33R2, 50F48, 50G1, 33V42, 33V43, 33V40, 33V41, 50G2, and 50F45 shall not exceed the emissions limits listed in the table below:

Facility	Stack(s)	PM Limit (lb/hr)	PM_{10} Limit (lb/hr)
Starch Feed Bin (33V1)	236 to 355	0.29	0.29
Starch Feed Bin (33V2)	237 to 355	0.29	0.29
Low Pressure Dry Starch Reactor (33R1)	238	0.078	0.078
Catalyst Storage Bin (33V5)	239	0.034	0.034
High Pressure Dry Starch Reactor (33R2)	240	0.08	0.08
Dry Starch Product Screening Receiver (50F48), Reactor 2 Mill (50G1)	243 to 355	0.07, total	0.07, total
Dry Starch Blend Bins (33V42, 33V43, 33V40, 33V41), Additives Mill (50G2)	244, 245, 246, 247 to 355	0.55, total	0.55, total
Dry Starch Product Screening Receiver (50F45)	262 to 355	0.07	0.07

Compliance with the above limits shall render the requirements of 326 IAC 2-2 not applicable to emission units 33V1, 33V2, 33R1, 33V5, 33R2, 50F48, 50G1, 33V42, 33V43, 33V40, 33V41, 50G2, and 50F45.

(b) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from each of the emission units 33V1, 33V2, 33R1, 33V5, 33R2, 50F48, 50G1, 33V42, 33V43, 33V40, 33V41, 50G2, and 50F45 shall not exceed a calculated pounds per hour limitation when operating at the corresponding process weight rate. Each pound per hour limitation shall be calculated with the following equations:

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

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

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

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

The PSD avoidance limits for PM in Condition D.6.1(a) are more stringent than the 326 IAC 6-3-2 allowable particulate emission rates based on maximum process weight rate for these facilities. Therefore, compliance with these noted PM limits shall satisfy compliance with 326 IAC 6-3-2.

D.6.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

The particulate emission rates from facilities 50V61 and 50V62 shall be limited as follows:

The particulate emission rates from bin vents 50F161 and 50F162 shall not exceed 0.11 lb/hr, each.

These limits are more stringent than the 326 IAC 6-3-2 allowable particulate emission rates based on maximum process weight rate for these facilities. Therefore, compliance with these limits shall satisfy compliance with 326 IAC 6-3-2.

Compliance Determination Requirements

D.6.3 Particulate Control

(a) In order to comply with Conditions D.6.1 and D.6.2, baghouses 33F101, 33F102, 33F201, 33F202, 50F45, 50F48, and 50F11 for particulate control shall be in operation and control particulate emissions at all times when an emission unit that it controls is in operation.

(b) In order to comply with Conditions D.6.1 and D.6.2, bin vents 33F1, 33F2, 33F5, 50F161, 50F162, 33F42, 33F43, 33F40, and 33F41 for particulate control shall be in operation and control particulate emissions at all times when an emission unit that it controls is in operation.

D.6.4 Broken or Failed Bag Detection – Single Compartment Baghouse

(a) For a single compartment baghouse controlling emissions from a process operated continuously, the feed to the 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), or

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

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

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

D.6.5 Visible Emissions Notations

(a) Visible emission notations of the stacks' 238, 239, 240, 355, and 361 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. 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.6.6 Broken or Failed Bag Detection – Multi-Compartment Baghouse

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

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

D.6.7 Record Keeping Requirements

(a) To document the compliance status with Condition D.6.5, the Permittee shall maintain a daily record of visible emission notations of stacks 238, 239, 240, 355, and 361 controlling the Starch Reaction Operation 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) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required to be maintained by this condition.

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(g) Starch Drying and Handling Operations, consisting of:

(1) One (1) Adipic Acid Storage Bin, identified as 43V90, loaded pneumatically via truck unloading, constructed in 1996, with emissions controlled by bin vent 43F90, and exhausting to stack 274.

(2) One (1) Starch Flash Dryer #1, identified as 40D1, constructed in 1986, with a heat input capacity of 14.4 MMBtu/hr, with emissions controlled by integral product collector/cyclones 40F1 and 40F2 and scrubber 40F3, and exhausting to stack 69.

(3) One (1) Pneumatic Product Transfer, identified as 40F7, constructed in 1986, with emissions controlled by integral product receiver/baghouse 40F7, and exhausting to stack 70.

(4) One (1) Pneumatic Conveying to Mill Feed Receiver, identified as 25F1, constructed in 1968, with emissions controlled by integral product receiver/baghouse 25F1, and exhausting to stack 147.

(5) One (1) Belt Dryer Mill, identified as 25G1, constructed in 1968, with emissions controlled by integral product receiver/baghouse 25F2, and exhausting to stack 146.

(6) One (1) Starch Storage Bin #8, identified as 7V8, loaded pneumatically via Pneumatic Conveyors, identified as 40C5 and 25C1, constructed in 1986, with emissions controlled by integral product receiver/bin vent 7F8, and exhausting to stack 71.

(7) One (1) Starch Storage Bin #9, identified as 7V9, loaded pneumatically via Pneumatic Conveyors, identified as 40C5 and 25C1, constructed in 1986, with emissions controlled by integral product receiver/bin vent 7F9, and exhausting to stack 72.

(8) One (1) Starch Flash Dryer #2, identified as 40D20, constructed in 1990 and modified in 1991, with a heat input capacity of 40 MMBtu/hr, with emissions controlled by integral product collector/cyclones 40F20 through 40F25 and scrubber 40F26, and exhausting to stack 73.

(9) One (1) Grinder Feed Collector, identified as 40F27, constructed in 1990, and exhausting to the intake of bins 7V20, 7V21, 7V22 and 7V23.

(10) One (1) Starch Grinder/Mill #1, identified as 40G20, constructed in 1990, with emissions controlled by integral product receiver/baghouse 40F28, and exhausting via vent 286 to stack 360.

(11) One (1) Starch Grinder/Mill #2, identified as 40G21, constructed in 1990, with emissions controlled by integral product receiver/baghouse 40F29, and exhausting via vent 287 to stack 360.

(12) One (1) Starch Product Bin #20, identified as 7V20, loaded pneumatically via Pneumatic Conveyor, identified as 40C31, constructed in 1992, with emissions controlled by bin vent 7F20, and exhausting to stack 76.

(13) One (1) Starch Product Bin #21, identified as 7V21, loaded pneumatically via Pneumatic Conveyor, identified as 40C31, constructed in 1992, with emissions

controlled by bin vent 7F21, and exhausting to stack 77.

(14) One (1) Starch Product Bin #22, identified as 7V22, loaded pneumatically via Pneumatic Conveyor, identified as 40C31, constructed in 1992, with emissions controlled by bin vent 7F22, and exhausting to stack 78.

(15) One (1) Starch Bin #33, identified as 7V23, loaded pneumatically via Pneumatic Conveyor, identified as 40C31, constructed in 1995, with emissions controlled by bin vent 7F33, and exhausting to stack 267.

(16) One (1) Starch Flash Dryer #3, identified as 43D71, constructed in 1995, with a heat input capacity of 40 MMBtu/hr, with emissions controlled by integral product collector/cyclones 43F81 through 43F86 and scrubber 43F80, and exhausting to stack 265.

(17) One (1) Flash #3 Mill, identified as 40G88, constructed in 1996, with emissions controlled by integral product receiver/baghouse 40F88, and exhausting to stack 266.

(18) One (1) Starch Bin #34, identified as 7V34, loaded pneumatically via Pneumatic Conveyor, identified as 43C75, constructed in 1995, with emissions controlled by bin vent 7F34, and exhausting to stack 268.

(19) One (1) Starch Bin #35, identified as 7V35, loaded pneumatically via Pneumatic Conveyor, identified as 43C75, constructed in 1995, with emissions controlled by bin vent 7F35, and exhausting to stack 269.

(20) One (1) Starch Blend Bin #91, identified as 7V91, loaded pneumatically via Pneumatic Conveyor, identified as 43C75, constructed in 1999, with emissions controlled by bin vent 7F91, and exhausting to stack 345.

(21) One (1) Starch Blend Bin #92, identified as 7V92, loaded pneumatically via Pneumatic Conveyor, identified as 43C75, constructed in 1999, with emissions controlled by bin vent 7F92, and exhausting to stack 346.

(22) One (1) Starch Roll Dryer #1, identified as 41D1, constructed in 1986, with emissions uncontrolled, and exhausting to stack 91.

(23) One (1) Starch Roll Dryer #2, identified as 41D2, constructed in 1986, with emissions uncontrolled, and exhausting to stack 92.

(24) One (1) Starch Roll Dryer #3, identified as 41D3, constructed in 1986, with emissions uncontrolled, and exhausting to stack 93.

(25) One (1) Starch Roll Dryer #4, identified as 41D4, constructed in 1993, with emissions uncontrolled, and exhausting to stack 94.

(26) One (1) Starch Roll Dryer #5, identified as 41D5, constructed in 1995, with emissions uncontrolled, and exhausting to stack 232.

(27) One (1) Starch Roll Dryer #6, identified as 41D6, constructed in 1995, with emissions uncontrolled, and exhausting to stack 233.

(28) One (1) Starch Roll Dryer #7, identified as 41D7, constructed in 1997, with emissions uncontrolled, and exhausting to stack 234.

(29) One (1) Starch Roll Dryer #8, identified as 41D8, constructed in 2000, with emissions uncontrolled, and exhausting to stack 235.

(30) One (1) Pneumatic Product Transfer Roll Dryer, identified as 41F200, constructed in 1986, with emissions controlled by product receiver/baghouse 41F200, and exhausting to the intake of mill 41G200.

(31) One (1) Roll Dryer Mill, identified as 41G200, constructed in 1986, with emissions controlled by integral product receiver/baghouse 41F210, and exhausting via vent 96 to stack 355.

(32) One (1) Pneumatic Product Transfer Roll Dryer, identified as 41F201, constructed in 1993, with emissions controlled by product receiver/baghouse 41F201, and exhausting to the intake of mill 41G201.

(33) One (1) Roll Dryer Mill, identified as 41G201, constructed in 1993, with emissions controlled by integral product receiver/baghouse 41F211, and exhausting via vent 100 to stack 355.

(34) One (1) Product Bin #10, identified as 41V10, loaded pneumatically via Pneumatic Conveyor, identified as 41C220, constructed in 1993, with emissions controlled by bin vent 41F10, and exhausting to stack 97.

(35) One (1) Product Bin #11, identified as 41V11, loaded pneumatically via Pneumatic Conveyor, identified as 41C220, constructed in 1993, with emissions controlled by bin vent 41F11, and exhausting to stack 98.

(36) One (1) Bulk Bag Dump Station, identified as 41F13, constructed in 2000, with emissions controlled by bin vent 41F13, and exhausting indoors to stack 344.

(37) One (1) 41 Building House Vacuum System, identified as 41F133, constructed in 2012, with emissions controlled by baghouse 41F133, and exhausting to stack 445.

(38) One (1) Spray Dryer #1, identified as 30D1, constructed in 1984, with a heat input capacity of 24 MMBtu/hr, with emissions controlled by integral product collector/cyclones 30F7 and 30F8 and product receivers/baghouses 30F2 and 30F3, and exhausting to stack 82.

(39) One (1) Product Transfer to Bins #14 and #15, identified as 41C145, constructed in 1987 and approved for modification in 2013, with emissions controlled by intermediate product collector/baghouse 30F133 using blower 30C133, exhausting to the product transfer system and integral product collector/baghouses 41F14 and 41F15, respectively, and exhausting via vent 85 to stack 355.

(40) One (1) Product Bin #14, identified as 41V14, constructed in 1987, with emissions controlled by bin vent 41F16, and exhausting to stack 87.

(41) One (1) Product Bin #15, identified as 41V15, constructed in 1987, with emissions controlled by bin vent 41F17, and exhausting to stack 88.

(42) One (1) Regular Starch Belt Dryer D4, identified as 16D4, constructed in 1966, with emissions controlled by the rotoclone scrubbers 16F26 and 17F78, and exhausting to stack 177.

(43) One (1) Belts Product Conveying Mill Product to Bins #4, and #5, identified as 7F25,

constructed in 1966, with emissions controlled by integral product collector/baghouse 7F25, and exhausting to stack 103.

(44) One (1) Product Bin #4, identified as 7V47, constructed in 1966, with emissions controlled by bin vent 7F70, and exhausting to stack 106.

(45) One (1) Product Bin #5, identified as 7V46, constructed in 1966, with emissions controlled by bin vent 7F69, and exhausting to stack 105.

(46) One (1) Spray Agglomeration System, identified as 50D101, constructed in 2001, with a heat input capacity of 6.2 MMBtu/hr, with emissions controlled by integral product collector/cyclones 50F111 and 50F112; and product receiver/baghouse 50F102, and exhausting via vent 349 to stack 361.

(47) One (1) Bulk Bag Feed #1 Dump Station, identified as 50V111, constructed in 2001, permitted in 2011, with emissions controlled by baghouse 50F106, and exhausting to stack 350.

(48) One (1) Bulk Bag Feed #2 Dump Station, identified as 50V112, constructed in 2001, permitted in 2011, with emissions controlled by baghouse 50F106, and exhausting to stack 350.

(49) One (1) Agglomeration Blender Receiver/Baghouse, identified as 50F106, loaded pneumatically via Pneumatic Conveyor, identified as Feed Blower 50C107, constructed in 2001, with emissions controlled by integral product collector/baghouse 50F106, and exhausting via vent 350 to stack 361.

(50) One (1) Natural Gas Fired Spray Dryer #2, identified as 46D200, constructed in 2006, with a heat input capacity of 25 million Btu per hour, with PM and PM_{10} emissions controlled by integral cyclones 46F221 through 46F224 and baghouses 46F231 through 46F232, and exhausting via vent 360 to stack 360. Nitrogen oxide (NO_x) emissions are controlled by low-NO_x burners rated at 0.04 lb/MMBtu.

(51) One (1) Product Transfer to Milling, identified as 30F13, constructed in 1987, with emissions controlled by integral product receiver/baghouse 30F13, and exhausting to the intakes of bins 41V45, 41V46, 41V47, and 33V44.

(52) One (1) Dryer Mill, identified as 30G1, constructed in 1987, with emissions controlled by integral product receiver/baghouse 30F15, and exhausting via vent 84 to stack 360.

(53) One (1) Product Bin #45, identified as 41V45, loaded pneumatically via Product Transfer to Milling, identified as 30F13, constructed in 2006, with emissions controlled by bin vent 41F45, and exhausting to stack 226.

(54) One (1) Product Bin #46, identified as 41V46, loaded pneumatically via Product Transfer to Milling, identified as 30F13, constructed in 2006, with emissions controlled by bin vent 41F46, and exhausting to stack 255.

(55) One (1) Product Bin #47, identified as 41V47, loaded pneumatically via Product Transfer to Milling, identified as 30F13, constructed in 2006, with emissions controlled by bin vent 41F47, and exhausting via vent 432.

(56) One (1) Starch Product Bin #44, identified as 33V44, loaded pneumatically via Product Transfer to Milling, identified as 30F13, constructed in 1995, with emissions controlled by bin vent 33F44, and exhausting to stack 248.

(57) One (1) Starch Roll Dryer #301, identified as 19D301, constructed in 2006, with emissions uncontrolled, and exhausting to stacks 405A and 405B.

(58) One (1) Starch Roll Dryer #302, identified as 19D302, constructed in 2006, with emissions uncontrolled, and exhausting to stacks 406A and 406B.

(59) One (1) Starch Roll Dryer #303, identified as 19D303, constructed in 2006, with emissions uncontrolled, and exhausting to stacks 407A and 407B.

(60) One (1) Starch Roll Dryer #304, identified as 19D304, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stacks 408A and 408B.

(61) One (1) Starch Roll Dryer #305, identified as 19D305, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stacks 409A and 409B.

(62) One (1) Roll Dryer Mill Feed Collector Baghouse, identified as 19F400, constructed in 2006, with emissions controlled by product collector/cyclone 19F400, and exhausting to the intake of Mill 19G401.

(63) One (1) Roll Dryer System Mill, identified as 19G401, constructed in 2006, with emissions controlled by integral product collector/baghouse 19F402, and exhausting to stack 366.

(64) One (1) Product Transfer to Bins #17 and #18, identified as 41C35, constructed in 1987, with emissions controlled by integral product collector/baghouses 41F20 and 41F21, respectively, and exhausting via vent 86 to stack 355.

(65) One (1) Product Bin #17, identified as 41V17, constructed in 1987, with emissions controlled by bin vent 41F22, and exhausting to stack 89.

(66) One (1) Product Bin #18, identified as 41V18, constructed in 1987, with emissions controlled by bin vent 41F23, and exhausting to stack 90.

(67) #2 Starch Agglomerator, identified as 52D210, approved in 2014 for construction, controlled by four product collection cyclones (52F220 - 52F223) followed by baghouse 52F230, and exhausting to stack 361. #2 Starch Agglomerator system consists of the following:

(A) One (1) dryer equipped with a direct-fired natural gas low NOx burner, with heat input capacity of 20 MMBtu/hr.

(B) One (1) mechanical fluid bed, identified as 52Y211, aspirated to the inlet of the agglomerator.

(C) One (1) fines recycle system, identified as 52C221, transferring product to the inlet of the agglomerator.

(D) One (1) #5 tote packing system with head hopper, identified as 52V245 and tote packer, identified as 52Z245 aspirated to the agglomerator #2 packer dust collector, identified as 52F225, exhausting via vent 362 to stack 361.

(E) One (1) #7 bag packing system with head hopper, identified as 52V247 and bag packer, identified as 52Z247 aspirated to the agglomerator #2 packer dust collector, identified as 52F225, exhausting via vent 326 to stack 361. General aspiration of the packer #7 bag conveying equipment is by the packer #6 House Dust Collector, identified as 56F602.

(F) One (1) reprocess bag dump, identified as 52V225, aspirated to the agglomerator #2 packer dust collector, identified as 52F225, and exhausting via vent 362 to stack 361. Reprocessed product is also transferred via a blower, identified as 52C224 to the packer dust collector, identified as 52F225, from the bag dump.

(68) Two (2) product storage bins, identified as 52V250 and 52V251, approved in 2014 for construction, controlled by bin vent filters, identified as 52F250 and 52F251, and exhausting to stacks 401 and 402. Only one of the two product storage bins can receive product from the agglomerator at any time.

(69) #4 Starch Flash Dryer, identified as 54D450, approved in 2014 for construction, controlled by six product collection cyclones, identified as 54F451-54F456, followed by a wet scrubber, identified as 54F460, and exhausting to stack 388. #4 Starch Flash Dryer System consists of the following:

(A) One (1) dryer equipped with a direct-fired natural gas low-NOx burner, with heat input capacity of 32MMBtu/hr.

(B) One (1) Starch Densifier Mill Surge Hopper, identified as 54V470, controlled by bin vent filter, identified as 54F471, and exhausting to stack 389.

(C) Three (3) Product Storage Bins, identified as 54V440, 54V441, and 54V4CC, equipped with bin vent filters, identified as 54F440, 54F441, and 54F4CC, and exhausting to stacks 385, 386, and 387.

(D) One (1) Product Bin #1, identified as 07V50, approved in 2014 for construction, formerly associated with Special Belt Dryer 16D5, with emissions controlled by bin vent 07F73, and exhausting to stack 109.

(E) One (1) Product Bin #2, identified as 07V49, approved in 2014 for construction, , formerly associated with Special Belt Dryer 16D5, with emissions controlled by bin vent 07F72, and exhausting to stack 108.

(F) One (1) Product Bin #3, identified as 07V48, approved in 2014 for construction, , formerly associated with Special Belt Dryer 16D5, with emissions controlled by bin vent 07F71, and exhausting to stack 107.

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

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

D.7.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3:

(a) The following emission units shall be controlled for PM and PM_{10} using BACT:

(1) Product Storage Bin #46 (41V46),

(2) Roll Dryer System Mill (19G401),

(3) Product Transfer to Bins 14 & 15 (41C145),

(4) Product Transfer to Bins 17 & 18 (41C35),

(5) Product Bin 14 (41V14),

(6) Product Bin 15 (41V15),

(7) Product Bin 17 (41V17),

(8) Product Bin 18 (41V18),

(9) Product Storage Bin #45 (41V45),

(10) Product Storage Bin (33V44),

(11) Starch Grinder/Mill #1 (40G20),

(12) Starch Grinder/Mill #2 (40G21),

(13) Starch Product Bin #20 (7V20),

(14) Starch Product Bin #21 (7V21),

(15) Starch Product Bin #22 (7V22),

(16) Starch Product Bin #23 (7V23), and

(17) Product Bin #47 (41V47).

For these units, the BACT for PM and PM_{10} (Filterable and Condensable) is the use of baghouses, and:

(1) PM and PM_{10} (Filterable and Condensable) emissions from the following baghouses shall not exceed:

Emission Unit	Baghouses	PM Limit (lb/hr)	PM_{10} Limit (lb/hr)
41V46	41F46	0.08	0.08
19G401	19F402	0.73	0.73
41C145	41F14 & 41F15	0.08	0.08
41C35	41F20 & 41F21	0.08	0.08
41V14	41F16	0.01	0.01
41V15	41F17	0.01	0.01
41V17	41F22	0.01	0.01
41V18	41F23	0.01	0.01
41V45	41F45	0.08	0.08
33V44	33F44	0.08	0.08
40G20	40F28	0.14	0.14
40G21	40F29	0.14	0.14
7V20	7F20	0.09	0.09
7V21	7F21	0.09	0.09

Emission Unit	Baghouses	PM Limit (lb/hr)	PM_{10} Limit (lb/hr)
7V22	7F22	0.09	0.09
7V23	7F33	0.09	0.09
41V47	41F47	0.08	0.08

(2) PM emissions from each of the baghouses shall not exceed 0.005 gr/dscf.

(3) PM_{10} (Filterable and Condensable) emissions from each of the baghouses shall not exceed 0.005 gr/dscf.

(4) The opacity from the stack exhausts except for 40F28 and 40F29 shall not exceed 3%.

(5) The opacity from baghouses 40F28 and 40F29 shall not exceed 8%.

(b) The following emission unit shall be controlled for PM and PM_{10} using BACT:

Spray Dryer #2 (46D200).

The BACT for PM and PM_{10} is the use of a baghouse, and:

(1) PM emissions from spray dryer #2 shall not exceed 0.008 gr/scf.

(2) PM_{10} (Filterable and Condensable) emissions from spray dryer #2 shall not exceed 0.008 gr/scf.

(3) PM emissions from spray dryer #2 shall not exceed 6.61 lbs/hr.

(4) PM_{10} (Filterable and Condensable) emissions from spray dryer #2 shall not exceed 6.61 lbs/hr.

(5) The opacity from the baghouse exhaust shall not exceed 8%.

(c) The following emission unit shall be controlled for PM and PM_{10} using BACT:

Starch Flash Dryer #2 (40D20).

The BACT for PM and PM_{10} is the use of a scrubber, and:

(1) PM emissions from starch flash dryer #2 shall not exceed 0.008 gr/acf.

(2) PM_{10} (Filterable and Condensable) emissions from starch flash dryer #2 shall not exceed 0.008 gr/acf.

(3) PM emissions from starch flash dryer #2 shall not exceed 7.54 lbs/hr.

(4) PM_{10} (Filterable and Condensable) emissions from starch flash dryer #2 shall not exceed 7.54 lbs/hr.

(5) The opacity from the scrubber exhaust shall not exceed 8%.

(d) For the following emission unit, BACT for NO_x is the use of low-NO_x burners rated at 0.04 lb/MMBtu or less and shall not exceed the emission rate as given below:

	Lbs/hr
Starch Spray Dryer #2 (46D200)	1.0

(e) The following emission units shall be controlled for VOC using BACT:

Propylated Starch Reactors, identified as 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, and 45V296.

VOC BACT has been determined to be the use of a low pH packed bed scrubber (45F212) and hydrolysis, and:

(1) A VOC emission rate of 3.25 lb per 100,000 lb of acid-killed starch and 6.0 lb per 100,000 lbs of non-acid-killed starch for Propylene Oxide Starch Reactors (equivalent to minimum 95% overall control efficiency).

(2) The combined propylene oxide input to Starch Modification Operations 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, 45V296, 40Y1, 40V1, 40V50, 40U2, 40V20, 40V21, 40F51, 40F52, 40F53, 40F54, 40V15, 40V16, 40U23, 43V71, 43V72, 43F71, 43F72, 43F73, 43V85, 43V86, 30V1, 30V2, 40V11, 40V12, 40V14, 46V297, 46V201, 46V213, 46V204, 45V117, 45V118, 45V119, 45V120; and Starch Drying and Handling Operations 40D1, 40D20, 43D71, 41D1, 41D2, 41D3, 41D4, 41D5, 41D6, 41D7, 41D8, 30D1, 16D4, 46D200, 19D301, 19D302, and 19D303 shall not exceed 1,500 tons per twelve consecutive month period for propylated starch reactions that do not undergo the acid-kill step.

D.7.2 Avoidance Limits for PSD [326 IAC 2-2] [326 IAC 6-3-2]

(a) In order to render the requirements of 326 IAC 2-2 not applicable, the PM emissions from emission units 40D1, 40F7, 7V8, and 7V9 shall not exceed the emission limits listed in the table below:

Emission Unit(s)	Stack(s)	PM Limit (lb/hr)
Starch Flash Dryer #1 (40D1)	69	1.2
Pneumatic Product Transfer (40F7)	70	1.5
Starch Storage Bin #8 (7V8)	71	0.03
Starch Storage Bin #9 (7V9)	72	0.03

Compliance with the above limits will render the requirements of 326 IAC 2-2 not applicable to emission units 40D1, 40F7, 7V8, and 7V9.

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

(1) PM emissions from emission unit 43V90 shall not exceed 1.2 lbs/hr.

(2) PM_{10} emissions from emission unit 43V90 shall not exceed 1.2 lbs/hr.

Compliance with the above limits, combined with the limited emissions from emission units 17Z03, 17F15, and 17V06 in the Starch Packaging and Loadout Operations, will render the requirements of 326 IAC 2-2 not applicable to emission unit 43V90.

(c) In order to render the requirements of 326 IAC 2-2 not applicable to CP 157-9182-00003, AA 157-15029-00003, and SPM 157-19702-00003, the PM and PM_{10} emissions from emission units 43D71, 40G88, 7V34, 7V35, 7V91, and 7V92 shall not exceed the emission limits listed in the table below:

Emission Unit(s)	Stack(s)	PM Limit (lb/hr)	PM_{10} Limit (lb/hr)
Starch Flash Dryer #3 (43D71)	265	7.54	7.54
Flash #3 Mill (40G88)	266	0.23	0.23
Starch Product Bins (7V34, 7V35, 7V91, 7V92)	268, 269, 345, 346	0.2 each	0.2 each

Compliance with the above limits, combined with the netting projects according to CP 157-4160-00003 and A 157-6170-00003, will render the requirements of 326 IAC 2-2 not applicable to emission units 43D71, 40G88, 7V34, 7V35, 7V91, and 7V92.

(d) In order to render the requirements of 326 IAC 2-2 not applicable to CP 157-5294-00003 and Significant Source Modification 157-30564-00003, the PM_{10} emissions from emission units 41F200, 41G200, 41V10, 41V11, 41F201, 41G201, 41F13, 30D1, and 30G1 shall not exceed the emission limits listed in the table below:

Emission Unit(s)	Stack(s)	PM_{10} Limit (lb/hr)
Roll Dryer 41F200 and Roll Dryer Mill 41G200	96 to 355	0.28
Product Bin #10 (41V10) and Product Bin #11 (41V11)	97 98	0.03
Roll Dryer 41F201 and Roll Dryer Mill 41G201	100 to 355	0.39
Bulk Bag Dump Station (41F13)	344	0.03
Spray Dryer (30D1)	82	4.45
Dryer Mill (30G1)	84	0.95

Compliance with the above limits, combined with the netting project according to CP 157-5294-00003 and the limited emissions from emission units 41F8, 41F81, 41F82, and 41F6 in the Starch Packaging and Loadout Operations, will render the requirements of 326 IAC 2-2 (PSD) not applicable to emission units 41F200, 41G200, 41V10, 41V11, 41F201, 41G201, 41F13, 30D1, and 30G1.

(e) In order to render the requirements of 326 IAC 2-2 not applicable, the PM and PM_{10} emissions from emission units 50V111, 50V112, 50F106, and 50D101 shall not exceed the emission limits listed in the table below:

Emission Unit(s)	Stack(s)	PM Limit (lb/hr)	PM_{10} Limit (lb/hr)
#1 Dump Station (50V111), #2 Dump Station (50V112), Agglomeration Blender/Receiver (50F106)	350 to 361	0.10, total	0.10, total
Spray Agglomeration System (50D101)	349 to 361	1.10	1.10

Compliance with the above limits, combined with the limited emissions from emission units 7V91, 7V92, 41D8, and 41F13, will render the requirements of 326 IAC 2-2 not applicable to emission units 50V111, 50V112, 50F106, and 50D101.

(f) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from each of the emission units 40D1, 7V8, 7V9, 43D71, 40G88, 7V34, 7V35, 7V91, 7V92, 50V111, 50V112, 50F106, and 50D101 shall not exceed a calculated pounds per hour limitation when operating at the corresponding process weight rate. Each pound per hour limitation shall be calculated with the following equations:

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

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

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

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

The PSD avoidance limits for PM in Conditions D.7.2(a), D.7.2(c), and D.7.2(e) are more stringent than the 326 IAC 6-3-2 allowable particulate emission rates based on maximum process weight rate for these facilities. Therefore, compliance with these noted PM limits shall satisfy compliance with 326 IAC 6-3-2.

D.7.3 Prevention of Significant Deterioration (PSD) Minor Limit PM, PM_{10}, $PM_{2.5}$, SO_2, VOC [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable to the 2014 modification, the applicant shall comply with the following:

(a) Starch Roll Dryer #304 (ID 19D304) and Starch Roll Dryer #305 (ID 19D305)

(1) The VOC emissions from each dryer shall not exceed 6 pounds per 100,000 pounds of propylated starch.

(2) The combined throughput to the Starch Roll Dryer #304 (ID 19D304) and Starch Roll Dryer #305 (ID 19D305) shall be limited to a total of 56 million pounds of starch per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) #2 Starch Agglomerator, identified as 52D210, Mechanical Fluid Bed, identified as 52Y211, and Fine Recycle System, identified as 52C221

(1) The combined PM emissions from #2 Starch Agglomerator, identified as 52D210, Mechanical Fluid Bed, identified as 52Y211, and Fine Recycle System, identified as 52C221, shall not exceed 2.00 lb/hr.

(2) The combined PM10 emissions from #2 Starch Agglomerator, identified as 52D210, Mechanical Fluid Bed, identified as 52Y211, and Fine Recycle System, identified as 52C221, shall not exceed 3.08 lb/hr.

(3) The combined PM2.5 emissions from #2 Starch Agglomerator, identified as 52D210, Mechanical Fluid Bed, identified as 52Y211, and Fine Recycle System, identified as 52C221, shall not exceed 2.19 lb/hr.

(4) The NOx emissions from the low NOx burner shall not exceed 0.04 lb/MMBtu.

(5) The CO emissions from the low NOx burner shall not exceed 0.08 lb/MMBtu.

(c) The PM emissions from #5 tote packing system with head hopper, identified as 52V245, tote packer, identified as 52Z245, #7 bag packing system with head hopper, identified as 52V247, bag packer, identified as 52Z247, reprocess bag dump, identified as 52V225, blower, identified as 52C224, shall not exceed 0.13 lb/hr.

(d) The PM10 emissions from #5 tote packing system with head hopper, identified as 52V245, tote packer, identified as 52Z245, #7 bag packing system with head hopper, identified as 52V247, bag packer, identified as 52Z247, reprocess bag dump, identified as 52V225, blower, identified as 52C224, shall not exceed 0.13 lb/hr.

(e) The PM2.5 emissions from #5 tote packing system with head hopper, identified as 52V245, tote packer, identified as 52Z245, #7 bag packing system with head hopper, identified as 52V247, bag packer, identified as 52Z247, reprocess bag dump, identified as 52V225, blower, identified as 52C224, shall not exceed 0.069 lb/hr.

(f) Two (2) product storage bins, identified as 52V250and 52V251

(1) The PM emissions from product storage bins, identified 52V250 and 52V251, shall not exceed 0.08 lb/hr, each.

(2) The PM10 emissions from product storage bins, identified 52V250 and 52V251, shall not exceed 0.08 lb/hr, each.

(3) The PM2.5 emissions from product storage bins, identified 52V250 and 52V251, shall not exceed 0.043 lb/hr, each.

(4) Only one (1) of the two (2) product storage bins, identified as 52V250 and 52V251, shall be in operation at time.

(g) #4 Starch Flash Dryer (54D450)

(1) The VOC emissions from the #4 Starch Flash Dryer (54D450), including VOC emissions from the Flash 4 Slurry Hold Tank (54V401), Flash 4 Larox Filter Feed Tank (54V403), and Flash 4 Larox Filters (54F421, 54F422, and 54F4MM) and Flash 4 Air Release Tanks (54V421, 54V422, and 54V4MM), shall not exceed 6 pounds per 100,000 pounds of propylated starch.

(2) The propylated starch production on #4 Starch Flash Dryer (54D450), shall be limited to a total of 250 million pounds of propylated starch per twelve (12) consecutive month period with compliance determined at the end of each month.

(3) The PM emissions from #4 Starch Flash Dryer, identified 54D450, shall not exceed 4.46 lb/hr.

(4) The PM10 emissions from #4 Starch Flash Dryer, identified 54D450, shall not exceed 6.4 lb/hr.

(5) The PM2.5 emissions from #4 Starch Flash Dryer, identified 54D450, shall not exceed 4.91 lb/hr.

(6) The NOx emissions from the low NOx burner shall not exceed 0.04 lb/MMBtu.

(7) The CO emissions from the low NOx burner shall not exceed 0.08 lb/MMBtu.

(h) The PM emissions from Starch Densifier Mill Surge Hopper, identified as 54V470, shall not exceed 0.02 lb/hr.

(i) The PM10 emissions from Starch Densifier Mill Surge Hopper, identified as 54V470, shall not exceed 0.02 lb/hr.

(j) The PM2.5 emissions from Starch Densifier Mill Surge Hopper, identified as 54V470, shall not exceed 0.01 lb/hr.

(k) The PM emissions from the three (3) Product Storage Bins, identified as 54V440, 54V441, and 54V4CC, shall not exceed 0.23 lb/hr each.

(l) The PM10 emissions from the three (3) Product Storage Bins, identified as 54V440, 54V441, and 54V4CC, shall not exceed 0.23 lb/hr each.

(m) The PM2.5 emissions from the three (3) Product Storage Bins, identified as 54V440, 54V441, and 54V4CC, shall not exceed 0.129 lb/hr each.

(n) The PM emissions from the Product Bins #1, #2, and #3, identified as 07V50, 07V49, 07V48 shall not exceed 0.23 lb/hr each.

(o) The PM10 emissions from the Product Bins #1, #2, and #3, identified as 07V50, 07V49, 07V48 shall not exceed 0.23 lb/hr each.

(p) The PM2.5 emissions from the Product Bins #1, #2, and #3, identified as 07V50, 07V49, 07V48 shall not exceed 0.129 lb/hr each.

(q) PM emissions from 41 building house vacuum system shall not exceed 0.04 lb/hr.

(r) PM10 emissions from 41 building house vacuum system shall not exceed 0.04 lb/hr.

(s) $PM_{2.5}$ emissions from 41 building house vacuum system shall not exceed 0.04 lb/hr.

Compliance with these limits, in combination with the limits in Conditions D.2.2, D.4.1, D.5.2, D.8.3 and D.9.2, shall limit the net emissions increase from the 2014 modification to less than twenty-five (25) tons PM, fifteen (15) tons PM10, ten (10) tons PM2.5, forty (40) tons SO2, forty (40) tons NOx, forty (40) tons VOC, and one-hundred (100) tons CO per twelve consecutive month period, and therefore, render the requirements of 326 IAC 2-2 (PSD) not applicable to the 2014 modification.

D.7.4 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

The particulate emission rates from emission units 43V90, 40F7, 25F1, 25G1, 16D4, 7F25, 7V50, 7V49, 7V48, 7V47, 7V46, 52D210, 52Y211, 52C221, 54D450, 54V470, 52V245, 52Z245, 52V247, 52Z247, 52V225, 52C224, 54V440, 54V441, 54V4CC, 07V50, 07V49, 07V48, 52V250, and 52V251 shall be limited as follows:

(a) The particulate emission rate from bin vent 43F90 shall not exceed 0.03 lb/hr. Note: This particulate emission rate limit is more restrictive than the limit provided under Condition D.7.2(b) and represents the PTE of the emission unit after control.

(b) The particulate emission rates from baghouses 7F25 shall not exceed 0.03 lb/hr.

(c) The particulate emission rate from baghouse 40F7 shall not exceed 0.15 lb/hr. Note: This particulate emission rate limit is more restrictive than the limit provided under Condition D.7.2(a) and represents the PTE of the emission unit after control.

(d) The particulate emission rate from baghouse 25F1 shall not exceed 0.05 lb/hr.

(e) The particulate emission rate from baghouse 25F2 shall not exceed 0.23 lb/hr.

(f) The particulate emission rates from scrubbers 16F26 and 17F78 shall not exceed 3.89 lb/hr, combined.

(g) The particulate emission rates from bin vents 7F70, and 7F69 shall not exceed 0.06 lb/hr, each.

(h) The combined PM emissions from Agglomerator #2, identified as 52D210, Mechanical Fluid Bed, identified as 52Y211 and Fine Recycle System, identified as 52C221, shall not exceed 2.00 lb/hr.

(i) The PM emissions from #4 Starch Flash Dryer, identified 54D450, shall not exceed 4.46 lb/hr.

(j) The PM emissions from Starch Densifier Mill Surge Hopper, identified as 54V470, shall not exceed 0.02 lb/hr.

(k) The PM emissions from #5 tote packing system with head hopper, identified as 52V245, tote packer, identified as 52Z245, #7 bag packing system with head hopper, identified as 52V247, bag packer, identified as 52Z247, reprocess bag dump, identified as 52V225, blower, identified as 52C224, shall not exceed 0.13 lb/hr.

(l) The PM emissions from the three (3) Product Storage Bins, identified as 54V440, 54V441, and 54V4CC, shall not exceed 0.23 lb/hr each.

(m) The PM emissions from the Product Bins #1, #2, and #3, identified as 54V50, 54V49, and 54V48 shall not exceed 0.23 lb/hr each.

(n) The PM emissions from product storage bins, identified 52V250 and 52V251, shall not exceed 0.08 lb/hr each.

These limits are more stringent than the 326 IAC 6-3-2 allowable particulate emission rates based on and on maximum process weight rate for these facilities. Therefore, compliance with these limits shall satisfy compliance with 326 IAC 6-3-2.

D.7.5 Volatile Organic Compounds (VOC) BACT [326 IAC 8-1-6] [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 and 326 IAC 8-1-6 as established in to PSD/SSM No. 157-18832-00003 and PSD/SSM 157-22808-00003, the following emission units shall be controlled for VOC using BACT:

Propylated Starch Reactors, identified as 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, and 45V296.

VOC BACT has been determined to be the use of a low pH packed bed scrubber (45F212) and hydrolysis and

(a) A VOC emission rate of 3.25 lb per 100,000 lb of acid-killed starch and 6.0 lb per 100,000 lbs of non-acid-killed starch for Propylene Oxide Starch Reactors (equivalent to minimum 95% overall control efficiency).

(b) The combined propylene oxide input to Starch Modification Operations 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, 45V296, 40Y1, 40V1, 40V50, 40U2, 40V20, 40V21, 40F51, 40F52, 40F53, 40F54, 40V15, 40V16, 40U23, 43V71, 43V72, 43F71, 43F72, 43F73, 43V85, 43V86, 30V1, 30V2, 40V11, 40V12, 40V14, 46V297, 46V201, 46V213, 46V204, 45V117, 45V118, 45V119, 45V120; and Starch Drying and Handling Operations 40D1, 40D20, 43D71, 41D1, 41D2, 41D3, 41D4, 41D5, 41D6, 41D7, 41D8, 30D1, 16D4, 46D200, 19D301, 19D302, and 19D303 shall not exceed 1,500 tons per twelve consecutive month period for propylated starch reactions that do not undergo the acid-kill step.

Compliance Determination Requirements

D.7.6 Particulate Control

(a) In order to comply with Conditions D.7.1, D.7.2, and D.7.4, scrubbers 40F3, 40F26, 43F80, 16F26, and 17F78 for particulate control shall be in operation and control emissions from facilities 40D1, 40D20, 43D71, and 16D4 at all times the respective facilities are in operation.

(b) In order to comply with Conditions D.7.1, D.7.2, and D.7.4, baghouses 40F7, 25F1, 25F2, 40F28, 40F29, 40F88, 41F200, 41F210, 41F201, 41F211, 30F2, 30F3, 41F14, 41F15, 7F25, 50F102, 50F106, 46F231, 46F232, 30F15, 19F402, 41F20, and 41F21 for particulate control shall be in operation and control particulate emissions from emission units 40F7, 25F1, 25G1, 40G20, 40G21, 40G88, 41F200, 41G200, 41F201, 41G201, 30D1, 41C145, 7F25, 50D101, 50V111, 50V112, 50F106, 46D200, 30G1, 19G401, and 41C35 at all times those emission units are in operation.

(c) In order to comply with Conditions D.7.1, D.7.2, and D.7.4, bin vents 43F90, 7F8, 7F9, 7F20, 7F21, 7F22, 7F23, 7F34, 7F35, 7F91, 7F92, 41F10, 41F11, 41F13, 41F16, 41F17, 7F73, 7F72, 7F71, 7F70, 7F69, 41F45, 41F46, 41F47, 33F44, 41F22, and 41F23 for particulate control shall be in operation and control particulate emissions from emission units 43V90, 7V8, 7V9, 7V20, 7V21, 7V22, 7V23, 40F27, 7V34, 7V35, 7V91, 7V92, 41V10, 41V11, 41F13, 41V14, 41V15, 7V50, 7V49, 7V48, 7V47, 7V46, 41V45, 41V46, 41V47, 33V44, 30F13, 41V17, and 41V18 at all times those facilities are in operation.

(d) In order to comply with Condition D.7.1(b), integral cyclones 46F221 through 46F224 shall be in operation and control particulate emissions from emission unit 46D200 at all times when the material feed system to emission unit 46D200 is in operation.

(e) In order to comply with Condition D.7.1(a), integral product collector/baghouse 19F402 shall be in operation and control particulate emissions from emission unit 19G401 at all times when the material feed system to emission unit 19G401 is in operation.

(f) In order to comply with Conditions D.7.3 and D.7.4, scrubber 54F460 for particulate control shall be in operation and control emissions from facility 54D450 at all times the respective facility is in operation.

(g) In order to comply with Conditions D.7.3 and D.7.4, baghouses 41F133, 52F225, 52F230, 52F250, 52F251, 54F471, 54F440, 54F441, 54F4CC, 07F71, 07F72, and 07F73 for particulate control shall be in operation and control particulate emissions from emission units 41F133, 52V245, 52Z245, 52V247, 52Z247, 52V225, 52C224, 52D210, 52Y211, 52C221, 52V250, 52V251, 54V470, 54V440, 54V441, 54V4CC, 07V48, 07V49, and 07V50 at all times those emission units are in operation.

D.7.7 Broken or Failed Bag Detection – Single Compartment Baghouse

(a) For a single compartment baghouse controlling emissions from a process operated continuously, the feed to the 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), or

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

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

D.7.8 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.7.1(a), the Permittee shall perform PM and PM_{10} testing of emission unit 19G401 and one of the emission units 40G20 and 40G21 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. PM_{10} includes both filterable and condensable PM.

(b) In order to demonstrate compliance with Condition D.7.1(b), not later than 180 days after the issuance of permit, T157-27029-00003, the Permittee shall perform PM and PM_{10} testing of emission unit 46D200 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. PM_{10} includes both filterable and condensable PM.

(c) In order to demonstrate compliance with Condition D.7.1(c), the Permittee shall perform PM and PM_{10} testing of emission unit 40D20 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. PM_{10} includes both filterable and condensable PM.

(d) In order to demonstrate compliance with Conditions D.7.1(e) and D.7.5(a), the Permittee shall perform VOC testing of scrubber 45F212 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration.

(e) In order to demonstrate compliance with Condition D.7.3(a), not later than 180 days after the startup of Starch Roll Dryers #304 and #305 Permittee shall perform VOC testing on either Starch Roll Dryer #304 or #305 utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration and the unit tested shall be the unit in which the longest amount of time has elapsed since its previous test.

(f) In order to demonstrate compliance with Condition D.7.3(b)(1), (2), and (3), not later than 180 days after the startup of the Agglomerator #2, identified as 52D210, the Mechanical Fluid Bed, identified as 52Y211, and the Fine Recycle System, identified as 52C221, the Permittee shall perform PM, PM10, and PM2.5 testing utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM_{10} and $PM_{2.5}$ includes both filterable and condensable PM.

(g) In order to demonstrate compliance with Conditions D.7.3(c), (d), and (e) and Conditions D.8.3(a), 8.3(b), and 8.3(c) in Starch Packaging and Loadout Operations, the Permittee shall perform PM, PM10, and PM2.5 testing on one of the two product receiver bagfilters controlling these emission units utilizing methods approved by the commissioner not later than 180 days after the startup of the #5 tote packing system with head hopper, identified as 52V245, tote packer, identified as 52Z245, #7 bag packing system with head hopper, identified as 52V247, bag packer, identified as 52Z247, reprocess bag dump, identified as 52V225, blower, identified as 52C224, or not later than 180 days after the startup of the Packer #6 Product Receiver, identified as 56F601, Packer #6 Head Hopper, identified as 56V600, Packer #6, identified as 56Z600, Reprocess Bag Dump Transfer Line, identified as 56C630. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration and the unit tested shall be the unit in which the longest amount of time has elapsed since its previous test. PM_{10} and $PM_{2.5}$ includes both filterable and condensable PM.

(h) In order to demonstrate compliance with Conditions D.7.3(f)), not later than 180 days after the startup of the product storage bins, identified as 52V250 and 52V251, the Permittee shall perform PM, PM10, and PM2.5 testing on one of the bin vent filters controlling these emission units utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration and the unit tested shall be the unit in which the longest amount of time has elapsed since its previous test. PM_{10} and $PM_{2.5}$ includes both filterable and condensable PM.

(i) In order to demonstrate compliance with Condition D.7.3(g), not later than 180 days after the startup of the #4 Starch Flash Dryer, identified as 54D450, the Permittee shall perform PM, PM10, and PM2.5 testing utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM_{10} and $PM_{2.5}$ includes both filterable and condensable PM.

(j) In order to demonstrate compliance with Conditions D.7.3(k), (l), and (m), and Condition D.7.3(n), (o), and (p), not later than 180 days after the startup of the three (3) Product Storage Bins, identified as 54V440, 54V441, 54V4CC or the three (3) Product Bins #1, #2, #3, identified as 07F50, 07F49, and 07F48 the Permittee shall perform PM, PM10, and PM2.5 testing on one of the six (6) bin vent filters controlling these units utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration and the unit tested shall be the unit in which the longest amount of time has elapsed since its previous test. PM_{10} and $PM_{2.5}$ includes both filterable and condensable PM.

(k) 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 obligations with regard to the performance testing required by this condition.

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

D.7.9 Visible Emissions Notations

(a) Pursuant to 40 CFR 64 (CAM), visible emission notations of the stacks' 69, 73, 177, 265, 360, and 361 exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) Visible emission notations of the stacks' 70, 71, 72, 76, 77, 78, 87, 88, 89, 90, 103, 105, 106, 107, 108, 109, 146, 147, 226, 248, 255, 266, 267, 268, 269, 274, 345, 346, 355, 361, 366, 385, 386, 387, 388, 389, 401, 402 and 432 exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(c) 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.

(d) 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.

(e) 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.

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

D.7.10 Scrubber Parametric Monitoring [40 CFR 64]

(a) The Permittee shall monitor and record the recirculation rate from scrubber 40F26 continuously when emission unit 40D20 is in operation.

(1) From the date of startup until the stack test results are available, the Permittee shall maintain the flow rate at or above the minimum of 300 gallons per minute. If the 1-hr average flow rate falls below 300 gallons per minute, the Permittee shall take a reasonable response.

(2) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Condition D.7.1(c).

(3) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate as observed during the latest compliant stack test. If the flow rate falls below the level observed during the latest compliant stack test, the Permittee shall take a reasonable response.

(4) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A flow rate reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) The Permittee shall monitor and record the recirculation rate from scrubber 43F80 continuously when emission unit 43D71 is in operation.

(1) From the date of startup until the stack test results are available, the Permittee shall maintain the flow rate at or above 300 gallons per minute. If the 1-hr average flow rate falls below 300 gallons per minute, the Permittee shall take a reasonable response.

(2) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Condition D.7.2(c).

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

compliant stack test. If the flow rate falls below the level observed during the latest compliant stack test, the Permittee shall take a reasonable response.

(4) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A flow rate 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.

(c) The Permittee shall monitor and record the recirculation rate from scrubber 40F3 at least once per day when emission unit 40D1 is in operation.

(1) From the date of startup until the stack test results are available, the Permittee shall maintain the flow rate at or above the minimum of 70 gallons per minute. If the flow rate falls below 70 gallons per minute, the Permittee shall take a reasonable response.

(2) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Condition D.7.2(a).

(3) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate as observed during the latest compliant stack test. If the flow rate falls below the level observed during the latest compliant stack test, the Permittee shall take a reasonable response.

(4) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A flow rate reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(d) The Permittee shall monitor and record the recirculation rate from scrubbers 16F26, 17F78 at least once per day when emission units and 16D4 are in operation.

(1) From the date of startup until the stack test results are available, the Permittee shall maintain the flow rate at or above the minimum of five (5) gallons per minute. If the flow rate falls below five (5) gallons per minute, the Permittee shall take a reasonable response.

(2) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Conditions D.7.4(f).

(3) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate as observed during the latest compliant stack test. If the flow rate falls below the level observed during the latest compliant stack test, the Permittee shall take a reasonable response.

(4) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A flow rate 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.

(e) The Permittee shall monitor and record the recirculation rate from scrubber 54F460 continuously when emission unit 54D450 is in operation.

(1) From the date of startup until the stack test results are available, the Permittee shall maintain the flow rate at or above the minimum of 1,000 gallons per minute. If the flow rate falls below 1,000 gallons per minute, the Permittee shall take a reasonable response.

(2) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Condition D.7.3(g).

(3) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate as observed during the latest compliant stack test. If the flow rate falls below the level observed during the latest compliant stack test, the Permittee shall take a reasonable response.

(4) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A flow rate 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.

(f) The instruments used for determining the recirculation rate shall comply with Section C - Instrument Specifications of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer's specifications, if used.

D.7.11 Baghouse Parametric Monitoring

(a) Pursuant to 40 CFR 64 (CAM), the Permittee shall record the pressure drop across baghouses 30F2, 30F3, 46F231, and 46F232 used in conjunction with emission units 30D1 and 46D200 at least once per day when the respective emission units are in operation.

(b) The Permittee shall record the pressure drop across baghouses 25F2, 40F28, 40F29, 40F88, 41F210, 41F211, 19F402, 30F15, 50F102, and 52F230 used in conjunction with emission units 25G1, 40G20, 40G21, 40G88, 41G200, 41G201, 19G401, 30G1, and 50D101, and 52D210 at least once per day when the respective emission units are in operation.

(c) When, for any one reading, the pressure drop across the baghouse is outside of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop of 0.5 and 7.5 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the normal range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(d) The instruments used for determining the pressure drop shall comply with Section C - Instrument Specifications of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer's specifications, if used.

D.7.12 Scrubber Failure Detection

In the event that scrubber failure for emission units 40D20, 43D71, 40D1, 16D4 and/or 54D450 has been observed:

The feed to the process shall be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the 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).

D.7.13 Broken or Failed Bag Detection – Multi-Compartment Baghouse

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

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

D.7.14 Record Keeping Requirements

(a) To document the compliance status with Conditions D.7.1(e) and D.7.5, the Permittee shall maintain monthly records for propylated starch reactions that do not undergo the acid-kill step to Starch Modification Operations 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, 45V296, 40Y1, 40V1, 40V50, 40U2, 40V20, 40V21, 40F51, 40F52, 40F53, 40F54, 40V15, 40V16, 40U23, 43V71, 43V72, 43F71, 43F72, 43F73, 43V85, 43V86, 30V1, 30V2, 40V11, 40V12, 40V14, 46V297, 46V201, 46V213, 46V204, 45V117, 45V118, 45V119, 45V120; and Starch Drying and Handling Operations 40D1, 40D20, 43D71, 41D1, 41D2, 41D3, 41D4, 41D5, 41D6, 41D7, 41D8, 30D1, 16D4, 46D200, 19D301, 19D302, and 19D303.

Note that this record is the same record as required in Condition D.5.14(a).

(b) To document the compliance status with Condition D.7.9, the Permittee shall maintain a daily record of visible emission notations of stacks 69, 73, 177, 265, 360, 361, 70, 71, 72, 76, 77, 78, 87, 88, 89, 90, 103, 105, 106, 107, 108, 109, 146, 147, 226, 248, 255, 266, 267, 268, 269, 274, 345, 346, 355, 361, 366, 385, 386, 387, 388, 389, 401, 402, and 432 controlling the Starch Drying and Handling Operation exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document the compliance status with Conditions D.7.10(a), D.7.10(b), and D.7.10(e) the Permittee shall maintain a daily record of the scrubber recirculation rates, as read by the continuous monitor, from scrubber 40F26, scrubber 43F80, and scrubber 54F460 controlling the Starch Drying and Handling Operation exhaust. The Permittee shall include in its daily record when a scrubber recirculation rate reading is not taken and the reason for the lack of a scrubber recirculation rate reading (e.g. the process did not operate that day).

(d) To document the compliance status with Conditions D.7.10(c) and D.7.10(d), the Permittee shall maintain a daily record of the scrubber recirculation rates from scrubbers 40F3, 16F26, and 17F78 controlling the Starch Drying and Handling Operation exhaust. The Permittee shall include in its daily record when a scrubber recirculation rate reading is not taken and the reason for the lack of a scrubber recirculation rate reading (e.g. the process did not operate that day).

(e) To document the compliance status with Condition D.7.11, the Permittee shall maintain a daily record of the pressure drop across baghouses 25F2, 40F28, 40F29, 40F88, 41F210, 41F211, 19F402, 30F2, 30F3, 30F15, 46F231, 46F232, 50F102, and 52F230 controlling the Starch Handling and Drying Operation exhaust. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(f) In order to document the compliance status with Condition D.7.3(g)(2), the Permittee shall maintain a monthly record of the propylated starch produced on #4 Starch Flash Dryer (54D450).

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

D.7.15 Reporting Requirements

(a) A quarterly report of the combined propylene oxide input to document the compliance status with Conditions D.7.1(e)(2), D.7.3(a)(2), D.7.3(g)(2), and D.7.5(b) shall be submitted not later than thirty (30) days after the end of the quarter being reported.

(b) A quarterly report of propylated starch production on #4 Starch Flash Dryer (54D450), to document the compliance status with condition D.7.3(g)(2) shall be submitted not later than thirty (30) days after the end of the quarter being reported.

(c) 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.8 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(h) Starch Packaging and Loadout Operations, consisting of:

(1) One (1) Product Bin #6/House Vacuum System, identified as 17V6, constructed in 1984, with emissions controlled by integral product receiver/cyclone 17F5 and baghouse 17F6, and exhausting via vent 190 to stack 177.

(2) One (1) Reprocess Bag Dump, identified as 17U58, constructed in 1997, with emissions controlled by baghouse 17F58, and exhausting indoors to stack 334.

(3) One (1) Reprocess Tote Dump, identified as 17U59, constructed in 1997, permitted in 2011, with emissions controlled by baghouse 17F58, and exhausting indoors to stack 334.

(4) One (1) Product Transfer to Main Packer #1, identified as 16F5, constructed in 1966, with emissions controlled by integral product collector/baghouse 16F5, and exhausting to stack 102.

(5) One (1) Cationic Product Receiver for Packer #1, identified as 17F27, constructed in 1966, with emissions controlled by integral baghouse 17F27, and exhausting to stack 102.

(6) One (1) Packer #1, identified as 17Z38, constructed in 1966, with emissions controlled by cyclone 17F9 and baghouse 17F10, and exhausting to stack 177.

(7) One (1) Packer #1 Reject Bag Dump, identified as 17V04, constructed in 2000, permitted in 2011, with emissions controlled by baghouse 17F10, and exhausting to stack 177.

(8) One (1) Bag Packer #2, identified as 17Z01, constructed in 1995, with emissions controlled by integral product collector/baghouse 17F01, and exhausting to stack 177.

(9) One (1) Bag Packer #2 House Dust Collector, identified as 17F02, constructed in 1995, with emissions controlled by baghouse 17F02, and exhausting to stack 177.

(10) One (1) Packer #2 Reject Bag Dump, identified as 17V05, constructed in 2000, permitted in 2011, with emissions controlled by baghouse 17F02, and exhausting to stack 177.

(11) One (1) Roll Dried Starch Product Transfer to Bag Packer #3 (41Z5), identified as 41F18, constructed in 2007, with emissions controlled by integral baghouse 41F18, and exhausting via vent 186 to stack 355.

(12) One (1) Roll Dried Starch Products Bag Packer #3, identified as 41Z5, constructed in 2007, with emissions controlled by baghouse 41F18, and exhausting via vent 186 to stack 355.

(13) One (1) Spray Cook Starch Product Transfer to Bag Packer #3 (41Z3), identified as 41F7, constructed in 2007, with emissions controlled by integral product collector/baghouse 41F7, and exhausting via vent 184 to stack 355.

(14) One (1) O.S. Starch Product Transfer to Bag Packer #3 (41Z3), identified as 41F181, constructed in 2007, with emissions controlled by integral baghouse 41F181, and

exhausting via vent 184 to stack 355.

(15) One (1) Spray Cook/O.S. Starch Products Bag Packer #3, identified as 41Z3, constructed in 2007, with emissions controlled by integral product collector/baghouse 41F7 or baghouse 41F181, and exhausting via vent 184 to stack 355.

(16) One (1) Malto Product Transfer to Bag Packer #3 (41Z1), identified as 41F182, constructed in 2007, with emissions controlled by integral baghouse 41F182, and exhausting via vent 428 to stack 355.

(17) One (1) Malto Products Bag Packer #3, identified as 41Z1, constructed in 2007, with emissions controlled by baghouse 41F182, and exhausting via vent 428 to stack 355.

(18) One (1) Dry Starch Reacted Product Transfer to Bag Packer #3 (41Z2), identified as 41F183, constructed in 2007, with emissions controlled by integral baghouse 41F183, and exhausting via vent 429 to stack 355.

(19) One (1) Dry Starch Reacted Products Bag Packer #3, identified as 41Z2, constructed in 2007, with emissions controlled by baghouse 41F183, and exhausting via vent 429 to stack 355.

(20) One (1) Bag Packer #3 House Dust Collector, identified as 41F186, constructed in 2007, with emissions controlled by baghouse 41F186, and exhausting via vent 430 to stack 355.

(21) One (1) Bag Packer #3 House Dust Collector, identified as 41F44, constructed in 1995, with emissions controlled by baghouse 41F44, and exhausting via vent 256 to stack 361.

(22) One (1) Bag Packer #4, identified as 17Z03, constructed in 1995, with emissions controlled by integral product collector/baghouses 17F03 and 17F04, and exhausting via vent 332 to stack 356.

(23) One (1) House Dust Collection System for Bag Packer #4, identified as 17F15, constructed in 1995, with emissions controlled by baghouse 17F15, and exhausting via vent 333 to stack 356.

(24) One (1) Packer #4 Reject Bag/Tote Dump, identified as 17V06, constructed in 2000, permitted in 2011, with emissions controlled by baghouse 17F15, and exhausting via vent 333 to stack 356.

(25) One (1) Bag Packer #6 System, approved in 2014 for construction, consisting of the following:

(A) One (1) Packer #6 Product Receiver, identified as 56F601, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(B) One (1) Packer #6 Head Hopper, identified as 56V600, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(C) One (1) Bag Packer #6, identified as 56Z600, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(D) One (1) Reprocess Bag Dump Transfer Line, identified as 56C630, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(E) One (1) Packer #6 House Dust Collector, identified as 56F602, controlling emissions from Ultrasonic Sealers and Bag Conveying Systems associated with Packer #6 and Bag Packer Conveying Equipment associated with #2 Starch Agglomerator, and exhausting via vent 381 to stack 361.

(F) One (1) Reprocess Bag Dump, identified as 56V630 with emissions controlled by baghouse 56F602, and exhausting via vent 381 to stack 361.

(26) One (1) Product Transfer for Bulk Bagger #1 (16J44), identified as 16F25, constructed in 1988, with emissions controlled by integral product receiver/baghouse 16F25, and exhausting via vent 191 to stack 177.

(27) One (1) Bulk Bagger #1, identified as 16J44, constructed in 1988, permitted in 2011, with emissions controlled by integral product receiver/baghouse 16F25, and exhausting via vent 191 to stack 177.

(28) One (1) Product Transfer for Bulk Bagger #2 (17Z14), identified as 17F14, constructed in 1996, with emissions controlled by integral product receiver/baghouse 17F14, and exhausting to stack 254.

(29) One (1) Bulk Bagger #2, identified as 17Z14, constructed in 1996, with emissions controlled by integral product receiver/baghouse 17F14, and exhausting to stack 254.

(30) One (1) Product Receiver for Bulk Bagger #3, identified as 41F8, constructed in 1988, with emissions controlled by integral product receiver/baghouse 41F8, and exhausting via vent 208 to stack 355.

(31) Two (2) Product Receivers for Bulk Bagger #3, identified as 41F81 and 41F82, constructed in 1997, with emissions controlled by integral product receiver/baghouses 41F81 and 41F82, and exhausting via vent 208 to stack 355.

(32) One (1) Bulk Bagger #3, identified as 41Z6, constructed in 1988, permitted in 2011, with emissions controlled by cyclone 41F60 and baghouse 41F44, and exhausting via vent 256 to stack 361.

(33) One (1) Bulk #1 Product Screening System, identified as 20F1, constructed in 1997, with emissions controlled by integral product receiver/baghouse 20F1, and exhausting via vent 330 to stack 404.

(34) One (1) Bulk #2 Product Screening System, identified as 20F50, constructed in 1997, with emissions controlled by integral product receiver/baghouse 20F50, and exhausting via vent 331 to stack 404.

(35) One (1) Bulk Starch Rail Loadout #1 (Track #9), identified as 20F61, constructed in 1966, with emissions controlled by baghouse 20F61, and exhausting via vent 135 to stack 404.

(36) One (1) Bulk Starch Rail Loadout #2 (Track #10), identified as 20F60, constructed in 1993, with emissions controlled by baghouse 20F60, and exhausting via vent 79 to stack 404.

(37) One (1) Pneumatic Truck Loadout, identified as 20F78 and 20F79, constructed in 1997, with emissions controlled by baghouses 20F78 and 20F79, and exhausting via

vent 264 to stack 404.

(38) One (1) Bulk Starch Rail Loadout #3 (J4), identified as 16F100, constructed in 1989, with emissions controlled by baghouse 16F100, and exhausting via vent 183 to stack 177.

(39) One (1) Dextrin/Roll/Spray Cooked Starch Bulk Truck Loadout, identified as 41F6, constructed in 1988, with emissions controlled by integral product receiver/baghouse 41F6, and exhausting to stack 189.

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

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

D.8.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3:

(a) The following emission units shall be controlled for PM and PM_{10} using BACT:

(1) Bulk Starch Rail Loadout #2 (20F60);

(2) Packer #3 Product Receivers and Packers (41F7, 41F181, 41Z3, 41F18, 41Z5, 41F182, 41Z1, 41F183, and 41Z2); and

(3) Packer #3 House Dust Collector (41F186).

(b) For these units, the BACT for PM and PM_{10} (Filterable and Condensable) is the use of baghouses, and:

(1) PM and PM_{10} (Filterable and Condensable) emissions from the following baghouses shall not exceed:

<table>
<tr><th>Emission Unit</th><th>Baghouse</th><th>PM Limit (lb/hr)</th><th>PM₁₀ Limit (lb/hr)</th></tr>
<tr><td>20F60</td><td>20F60</td><td>0.09</td><td>0.09</td></tr>
<tr><td>41F7</td><td>41F7</td><td rowspan="3">0.11</td><td rowspan="3">0.11</td></tr>
<tr><td>41F181</td><td>41F181</td></tr>
<tr><td>41Z3</td><td>41F7 or 41F181</td></tr>
<tr><td>41F18</td><td>41F18</td><td rowspan="2">0.11</td><td rowspan="2">0.11</td></tr>
<tr><td>41Z5</td><td>41F18</td></tr>
<tr><td>41F182</td><td>41F182</td><td rowspan="2">0.11</td><td rowspan="2">0.11</td></tr>
<tr><td>41Z1</td><td>41F182</td></tr>
<tr><td>41F183</td><td>41F183</td><td rowspan="2">0.11</td><td rowspan="2">0.11</td></tr>
<tr><td>41Z2</td><td>41F183</td></tr>
<tr><td>41F186</td><td>41F186</td><td>0.65</td><td>0.65</td></tr>
</table>

(2) PM emissions from each of the baghouses shall not exceed 0.005 gr/dscf.

(3) PM_{10} (Filterable and Condensable) emissions from each of the baghouses shall not exceed 0.005 gr/dscf.

(4) The opacity from the stack exhausts shall not exceed 3%.

D.8.2 Avoidance Limits for PSD [326 IAC 2-2] [326 IAC 6-3-2]

(a) In order to render the requirements of 326 IAC 2-2 not applicable to CP 157-4160-00003 and Significant Source Modification 157-30564-00003, the PM emissions from emission units 17F01, 17Z01, 17U59, 17U58, 17Z14, 17F14, 20F1, 20F50, 20F78, and 20F79 shall not exceed the emissions limits listed in the table below:

Facility	Stack	PM limit (lb/hr)	PM_{10} limit (lb/hr)
Product receiver (17F01) for Bag Packer #2 (17Z01)	177	0.17	N/A
Reprocess Tote Dump (17U59), Reprocess Bag Dump (17U58)	334	0.03, total	0.03, total
Bulk Bagger #2 (17Z14), Product Transfer for Bulk Bagger #2 (17F14)	254	0.08, total	0.08, total
Bulk #1 Product Screen (20F1), Bulk #2 Product Screen (20F50)	330/331 to 404	1.0, total	1.0, total
Pneumatic Truck Loadout (20F78/20F79)	404	0.12, total	0.12, total

Compliance with the above limits, combined with the netting project according to CP 157-2993-00003, will render the requirements of 326 IAC 2-2 not applicable to emission units 17F01, 17Z01, 17U59, 17U58, 17Z14, 17F14, 20F1, 20F50, 20F78, and 20F79.

(b) In order to render the requirements of 326 IAC 2-2 not applicable, the PM emissions from 17Z03 (controlled by baghouses 17F03 and 17F04), 17F15, and 17V06 shall not exceed 2.2 pounds per hour, combined. Compliance with this limit, combined with the limited emissions from emission unit 43V90 in the Starch Drying and Handling Operations, will render the requirements of 326 IAC 2-2 not applicable to emission units 17Z03, 17F15, and 17V06.

(c) In order to render the requirements of 326 IAC 2-2 not applicable to CP 157-5294-00003, A 157-6571-00003, and Significant Source Modification 157-30564-00003, the PM and PM_{10} emissions from emission units 41Z6, 41F44, 16J44, 16F25, 41F8, 41F81, 41F82, 16F100, and 41F6 shall not exceed the emissions limits listed in the table below:

Facility	Stack	PM Limit (lb/hr)	PM_{10} Limit (lb/hr)
Bulk Bagger #3 (41Z6), Bag Packer #3 House Dust Collector (41F44)	256 to 361	0.69, total	0.69, total
Bulk Bagger #1 (16J44), Product Transfer for Bulk Bagger #1 (16F25)	191 to 177	0.13, total	0.13, total
Product Receivers for #3 Bulk Bagger (41F8, 41F81, and 41F82)	208 to 355	0.11	0.11
J-4 Starch Rail Loadout Collector (16F100)	183 to 177	0.17	0.17
33 Bldg. Starch Bulk Truck Loadout (41F6)	189	0.04	0.04

Compliance with the above limits, combined with the netting project according to CP 157-5294-00003 and the limited emissions from emission units 41G200, 41V10, 41V11, 41G201, 41F13, 30D1, and 30G1 in the Starch Drying and Handling Operations, will render the requirements of 326 IAC 2-2 (PSD) not applicable to emission units 41Z6, 41F44, 16J44, 16F25, 41F8, 41F81, 41F82, 16F100, and 41F6.

(d) In order to render the requirements of 326 IAC 2-2 not applicable to Significant Source Modification 157-30564-00003, the PM and PM_{10} emissions from emission units 17Z38, 17V04, 17F02, 17V05, 17F15, and 17V06 shall not exceed the emissions limits listed in the table below:

Emission Unit(s)	Stack(s)	PM Limit (lb/hr)	PM_{10} Limit (lb/hr)
House Dust Collector (17F10) for Bag Packer #1 (17Z38), Packer #1 Reject Bag Dump (17V04)	177	1.24, total	1.24, total
Bag Packer #2 House Dust Collector (17F02), Packer #2 Reject Bag Dump (17V05)	177	1.1, total	1.07, total
House Dust Collection System for Bag Packer #4 (17F15), Packer #4 Reject Bag/Tote Dump (17V06)	333	2.2, total	1.07, total

Compliance with the above limits, combined with the limited PM emissions from emission units 17F02 and 17V05, shall render the requirements of 326 IAC 2-2 not applicable to emission units 17Z38, 17V04, 17F02, 17V05, 17F15, and 17V06.

(e) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from each of the emission units 17F01, 17Z01, 17U59, 17U58, 17Z14, 17F14, 20F78, 20F79, 41Z6, 41F44, 16J44, 16F25, 41F8, 41F81, 41F82, 16F100, 41F6, 17F10, 17Z38, 17V04, 17F02, 17V05, 17F15, 17V06 shall not exceed a calculated pounds per hour limitation when operating at the corresponding process weight rate. Each pound per hour limitation shall be calculated with the following equations:

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

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

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

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

The PSD avoidance limits for PM in Conditions D.8.2(a), D.8.2(c), and D.8.2(d) are more stringent than the 326 IAC 6-3-2 allowable particulate emission rates based on maximum process weight rate for these facilities. Therefore, compliance with these noted PM limits shall satisfy compliance with 326 IAC 6-3-2.

D.8.3 Prevention of Significant Deterioration (PSD) Minor Limit PM, PM_{10}, $PM_{2.5}$ [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable to the 2014 modification, the applicant shall comply with the following:

(a) The combined PM emission from Packer #6 Product Receiver, identified as 56F601, Packer #6 Head Hopper, identified as 56V600, Packer #6, identified as 56Z600, Reprocess Bag Dump Transfer Line, identified as 56C630 shall not exceed 0.13 lb/hr.

(b) The combined PM_{10} emission from Packer #6 Product Receiver, identified as 56F601, Packer #6 Head Hopper, identified as 56V600, Packer #6, identified as 56Z600, Reprocess Bag Dump Transfer Line, identified as 56C630 shall not exceed 0.13 lb/hr.

(c) The combined $PM_{2.5}$ emission from Packer #6 Product Receiver, identified as 56F601, Packer #6 Head Hopper, identified as 56V600, Packer #6, identified as 56Z600, Reprocess Bag Dump Transfer Line, identified as 56C630 shall not exceed 0.069 lb/hr.

(d) The combined PM emissions from Ultrasonic Sealers and Bag Conveying Systems associated with Packer #6, Reprocess Bag Dump, identified as 56V630, and Bag Packer Conveying Equipment associated with #2 Starch Agglomerator, controlled by baghouse 56F602, shall not exceed 0.54 lb/hr.

(e) The combined PM_{10} emissions from Ultrasonic Sealers and Bag Conveying Systems associated with Packer #6, Reprocess Bag Dump, identified as 56V630, and Bag Packer Conveying Equipment associated with #2 Starch Agglomerator, controlled by baghouse 56F602, shall not exceed 0.54 lb/hr.

(f) The combined $PM_{2.5}$ emissions from Ultrasonic Sealers and Bag Conveying Systems associated with Packer #6, Reprocess Bag Dump, identified as 56V630, and Bag Packer Conveying Equipment associated with #2 Starch Agglomerator, controlled by baghouse 56F602, shall not exceed 0.294 lb/hr.

Compliance with these limits, in combination with the limits in Conditions D.2.2, D.4.1, D.5.2, D.7.3 and D.9.2, shall limit the net emissions increase from the 2014 modification to less than twenty-five (25) tons PM, fifteen (15) tons PM_{10}, ten (10) tons $PM_{2.5}$, forty (40) tons SO_2, forty (40) tons NOx, forty (40) tons VOC, and one-hundred (100) tons CO per twelve consecutive month period, and therefore, render the requirements of 326 IAC 2-2 (PSD) not applicable to the 2014 modification.

D.8.4 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

The particulate emission rates from emission units 17V6, 16F5, 17F27, 17Z03, 20F1, 20F50, 20F61, 56F601, 56V600, 56Z600, and 56C630 shall be limited as follows:

(a) The particulate emission rate from baghouse 17F6 shall not exceed 0.12 lb/hr.

(b) The particulate emission rates from baghouses 16F5 and 17F27 shall not exceed 0.13 lb/hr, combined.

(c) The particulate emission rates from baghouse 20F61 shall not exceed 0.17 lb/hr.

(d) The particulate emission rates from baghouses 17F03 and 17F04 shall not exceed 0.20 lb/hr, combined. Note this particulate emission rate limit is more restrictive than the limit provided under Condition D.8.2(b) and represents the PTE of the emission unit after control.

(e) The particulate emission rates from baghouses 20F1 and 20F50 shall not exceed 0.15 lb/hr, each. Note this particulate emission rate limit is more restrictive than the limit provided under Condition D.8.2(a) and represents the PTE of the emission unit after control.

(f) The particulate emissions rate from baghouse 56F601 shall not exceed 0.13 lb/hr.

(g) The particulate emissions rate from baghouse 56F602 shall not exceed 0.54 lb/hr.

These limits are more stringent than the 326 IAC 6-3-2 allowable particulate emission rates based on maximum process weight rate for these facilities. Therefore, compliance with these limits shall satisfy compliance with 326 IAC 6-3-2.

Compliance Determination Requirements

D.8.5 Particulate Control

(a) In order to comply with Conditions D.8.1, D.8.2, and D.8.4, baghouses 17F6, 17F58, 16F5, 17F27, 17F10, 17F01, 17F02, 41F18, 41F7, 41F181, 41F182, 41F183, 41F186, 41F44, 17F03, 17F04, 17F15, 16F25, 17F14, 41F8, 41F81, 41F82, 20F1, 20F50, 20F61, 20F60, 20F78, 20F79, 16F100, and 41F6 for particulate control shall be in operation and control particulate emissions from emission units 17V6, 17U58, 17U59, 16F5, 17F27, 17Z38, 17V04, 17Z01, 17F02, 17V05, 41F18, 41Z5, 41F7, 41F181, 41Z3, 41F182, 41Z1, 41F183, 41Z2, 41F186, 41F44, 41Z6, 17Z03, 17F15, 17V06, 16F25, 16J44, 17F14, 17Z14, 41F8, 41F81, 41F82, 20F1, 20F50, 20F61, 20F60, 20F78, 20F79, 16F100, and 41F6 at all times those emission units are in operation.

(b) In order to comply with Condition D.8.2(b), only one of the baghouses 17F03 and 17F04 for particulate control shall be in operation and control particulate emissions from emission unit 17Z03 at all times emission unit 17Z03 is in operation.

(c) In order to comply with Condition D.8.2(c), only one of the Product Receivers for Bulk Bagger #3 (41F8, 41F81, and 41F82) shall be in operation at any one time.

(d) In order to comply with Condition D.8.3, baghouses 56F601 and 56F602 for particulate control shall be in operation and control particulate emissions from emission units 56F601, 56V600, 56Z600, 56C630, 56V630, Ultrasonic Sealers and Bag Conveying Systems associated with Packer #6 and Bag Packer Conveying Equipment associated with #2 Starch Agglomerator at all times those emission units are in operation.

D.8.6 Broken or Failed Bag Detection – Single Compartment Baghouse

(a) For a single compartment baghouse controlling emissions from a process operated continuously, the feed to the 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), or

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

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

D.8.7 Testing Requirements [326 IAC 2-7-5(1)]

(a) In order to demonstrate compliance with Condition D.8.1(b), the Permittee shall perform PM and PM_{10} testing of emission unit 41F186 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. PM_{10} includes filterable and condensable PM.

(b) In order to demonstrate compliance with Conditions D.8.3(a), 8.3(b), and 8.3(c) and with Conditions D.7.3(c), (d), and (e) in Starch Drying and Handling Operations, the Permittee shall perform PM, PM10, and PM2.5 testing on one of the two product receiver bagfilters controlling these emission units utilizing methods approved by the commissioner not later than 180 days after the startup of the Packer #6 Product Receiver, identified as 56F601, Packer #6 Head Hopper, identified as 56V600, Packer #6, identified as 56Z600, Reprocess Bag Dump Transfer Line, identified as 56C630 or not later than 180 days after the startup of the #5 tote packing system with head hopper, identified as 52V245, tote packer, identified as 52Z245, #7 bag packing system with head hopper, identified as 52V247, bag packer, identified as 52Z247, reprocess bag dump, identified as 52V225, blower, identified as 52C224, Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM_{10} and $PM_{2.5}$ includes both filterable and condensable PM.

(c) Not later than 180 days after the startup of the bag packer #6 system, in order to demonstrate compliance with Condition D.8.3(d), D.8.3(e), and D.8.3(f), the Permittee shall perform PM, PM_{10}, and $PM_{2.5}$ testing on the Ultrasonic Sealers and Bag Conveying Systems associated with Packer #6, reprocess Bag Dump, identified as 56V630, and Bag Packer Conveying Equipment associated with #2 Starch Agglomerator, utilizing methods approved by the commissioner. PM_{10} and $PM_{2.5}$ includes filterable and condensable PM.

(d) 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 obligations with regard to the performance testing required by this condition.

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

D.8.8 Visible Emissions Notations

(a) Pursuant to 40 CFR 64 (CAM), visible emission notations of the stack 177 exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) Visible emission notations of the stacks' 102, 189, 254, 332, 333, 334, 355, 361, and 404 exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(c) 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.

(d) 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.

(e) 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.

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

D.8.9 Baghouse Parametric Monitoring

(a) Pursuant to 40 CFR 64 (CAM), the Permittee shall record the pressure drop across baghouse 17F10 used in conjunction with emission units 17Z38 and 17V04 at least once per day when the respective emission units are in operation.

(b) The Permittee shall record the pressure drop continuously across baghouse 56F602 used in conjunction with emission units 56 Bldg Conv., 56V630, and 52 Bldg Conv. when the respective emission units are in operation.

(c) When, for any one reading, the pressure drop across the baghouse is outside of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop of 0.5 and 7.5 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the normal range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(d) The instruments used for determining the pressure drop shall comply with Section C - Instrument Specifications of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer's specifications, if used.

D.8.10 Broken or Failed Bag Detection – Multi-Compartment Baghouse

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

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

D.8.11 Record Keeping Requirements

(a) To document the compliance status with Condition D.8.8, the Permittee shall maintain a daily record of visible emission notations of stacks 102, 177, 189, 254, 332, 333, 334, 355, 361, and 404 controlling the Starch Packaging and Loadout Operation exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(b) To document the compliance status with Condition D.8.9, the Permittee shall maintain a daily record of the pressure drop across baghouse 17F10 and 56F602 controlling the Starch Packaging and Loadout Operation exhaust. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

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

SECTION D.9 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(i) Utility Area, consisting of:

(1) Three (3) natural gas-fired boilers, identified as 11B1, 11B2 and 11B3, constructed in 1966, each with a heat input capacity of 125 MMBtu/hr, with emissions uncontrolled, and exhausting to stack 197.

(2) One (1) NG-fired boiler, identified as 31B1, constructed in 1984 and modified in 2004 and approved in 2014 for modification, with a heat input capacity of 231 MMBtu/hr, equipped with four (4) low-NO_x burners, and exhausting to stack 202.

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

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

D.9.1 Prevention of Significant Deterioration: Best Available Control Technology [326 IAC 2-2-3]

Pursuant to PSD (79) 1557, issued June 21, 1984, and Part 70 Operating Permit No. T157-6009-00003, issued June 28, 2004:

(a) The controlled particulate matter (PM) emissions from boiler 31B1 shall not exceed 0.05 pounds per MMBtu heat input.

(b) The PM emissions from boiler 31B1 shall not exceed 56 tons per year, combined.

(c) The sulfur dioxide (SO_2) emissions from boiler 31B1 shall not exceed 1.2 pounds per MMBtu heat input and 1,215 tons per 12 month consecutive period.

(d) The nitrogen oxides (NO_x) emissions from boiler 31B1 shall not exceed 0.7 pounds per MMBtu and 782 tons per 12 month consecutive period.

(e) The carbon monoxide (CO) emissions from boiler 31B1 shall not exceed 10.2 pounds per hour and 45 tons per 12 month consecutive period.

(f) The volatile organic compounds (VOC) emissions from boiler 31B1 shall not exceed 1.1 pounds per hour and 5 tons per 12 month consecutive period.

(g) Only one of the identical gas-fired boilers (11B1, 11B2, or 11B3) will be operated when 31B1 is operating. The only exception is the period of time required to replace the operation of boiler 31B1 with the operation of the two remaining standby gas/oil boilers. In no case will this period of time exceed eight (8) hours.

Compliance with these requirements will satisfy the requirements of 326 IAC 2-2 (PSD) for Boilers 11B1, 11B2, 11B3, and 31B1.

D.9.2 Prevention of Significant Deterioration (PSD) Minor Limit NOX, CO [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable to the 2014 modification, the Permittee shall comply with the following:

(a) The NOx emissions form NG-fired boiler, identified as 31B1, shall not exceed 0.1 lb/MMBtu.

(b) The CO emissions form NG-fired boiler, identified as 31B1, shall not exceed 0.07 lb/MMBtu.

Compliance with these limits, in combination with the limits in Conditions D.4.1, D.5.2, D.7.3, D.8.3 and D.9.2, shall limit the net emissions increase from the 2014 modification to less than twenty-five (25) tons PM, fifteen (15) tons PM_{10}, ten (10) tons $PM_{2.5}$, forty (40) tons SO_2, forty (40) tons NO_X, forty (40) tons VOC, and one-hundred (100) tons CO per twelve consecutive month period, and therefore, render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2014 modification.

D.9.3 Particulate Matter (Sources of Indirect Heating) [326 IAC 6-2-3(d)]

Pursuant to 326 IAC 6-2-3(d) (Particulate Emission Limitation For Sources of Indirect Heating), the particulate matter emissions from boilers 11B1, 11B2, and 11B3, constructed in 1966, shall not exceed 0.8 pounds per MMBtu heat input, each.

D.9.4 Particulate Matter (Sources of Indirect Heating) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitation For Sources of Indirect Heating), the particulate matter emissions from boiler 31B1, constructed in 1985, modified in 2004 and approved in 2014 for modification, shall not exceed 0.20 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = 1.09 / Q^{0.26}$$

Where:
Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input.
Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input. The maximum operating capacity is specified in the facility’s permit application, except when some lower capacity is contained in the facility’s operation permit; in which case, the capacity specified in the operation permit shall be used (Q = 666 MMBtu/hr).

Compliance Determination Requirements

D.9.5 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.9.1(a) and D.9.1(b), the Permittee shall perform PM testing of emission unit 31B1 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 obligations with regard to the performance testing required by this condition.

(b) In order to demonstrate compliance with Condition D.9.2(a), not later than 180 days after the startup of the NG-fired boiler, identified as 31B1, the Permittee shall perform NOx testing, utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

(c) In order to demonstrate compliance with Condition D.9.2(b), not later than 180 days after the startup of the NG-fired boiler, identified as 31B1, the Permittee shall perform CO testing, utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

(d) 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 obligations with regard to the performance testing required by this condition.

SECTION D.10 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(j) One (1) Wastewater Treatment Anaerobic Digester, identified as 34V10, constructed in 1985. Biogas emissions can be:

(1) Controlled by the use of an alkaline scrubber, identified as 34V11, for controlling H_2S emissions; and

(A) Used as fuel in fiber flash dryer furnace 21B501; and/or

(B) Used as fuel in gluten flash dryer 48D101; and/or

(C) Combusted in one (1) main flare (21Z1), exhausting to stack 271, if the biogas produced exceeds these emissions units' capacity;

or

(2) Combusted in one (1) emergency flare (34Z1), exhausting to stack 272.

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

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

D.10.1 Prevention of Significant Deterioration [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3, the SO_2 BACT for emission unit 34V10 shall be the use of alkaline scrubber 34V11; and

(a) The scrubber shall have a minimum H_2S control efficiency of 90%, and shall not exceed 9 lbs/hr SO_2 (equivalent to 4.78 lbs/hr of H_2S) in the scrubber outlet, when the inlet H_2S concentration to the scrubber is more than 1.1% by volume.

(b) The scrubber shall have an outlet H_2S concentration of less than 0.11% by volume, and shall not exceed 9 lbs/hr SO_2 (equivalent to 4.78 lbs/hr H_2S) in the scrubber outlet if the inlet concentration of H_2S is 1.1% by volume or less.

(c) To determine compliance with Condition D.10.1(a) and (b), the hydrogen sulfide content of the untreated biogas, the hydrogen sulfide content of the biogas treated by the biogas scrubber (34V11), the temperature of the biogas at the time of testing, and the total amount of biogas treated by the scrubber (34V11) shall be measured on a daily basis and used to calculate an average hourly sulfur dioxide emission rate and scrubber removal efficiency. If the biogas is directed to the emergency flare (34Z1), the hydrogen sulfide content of the untreated biogas, the temperature of the untreated biogas at the time of testing, and the total amount of untreated biogas burned by the emergency flare (34Z1) shall be measured on a daily basis and used to calculate a daily sulfur dioxide emission rate.

(d) The Permittee shall notify the IDEM, OAQ within two working days of any period if any H_2S is emitted directly to the atmosphere without being burned.

Compliance Determination Requirements

D.10.2 Hydrogen Sulfide (H2S)

In order to comply with Condition D.10.1:

(a) Scrubber 34V11 for H_2S control shall be in operation and control emissions from emission unit 34V10 at all times when emission unit 34V10 is producing biogas and the biogas is used as fuel in fiber flash dryer furnace 21B501 and gluten flash dryer 48D101.

(b) Main flare 21Z1 for H_2S control shall be in operation and control emissions from scrubber 34V11 at all times when biogas is routed to scrubber 34V11 and is not used as fuel in fiber flash dryer furnace 21B501 and/or gluten flash dryer 48D101.

(c) Emergency flare 34Z1 for H_2S control shall be in operation and combust the biogas at all times when biogas is vented to it, and:

(1) The amount of biogas produced by emission unit 34V10 exceeds the capacities of fiber flash dryer furnace 21B501, gluten flash dryer 48D101, and main flare 21Z1, or

(2) Inspection or maintenance of scrubber 34V11 or blowers occurs that requires biogas from emission unit 34V10 be isolated to allow that maintenance to be performed safely.

D.10.3 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.10.1, the Permittee shall perform H_2S testing on the inlet and outlet of scrubber 34V11 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 obligations with regard to the performance testing required by this condition. All hydrogen sulfide measured will be assumed to have been converted to sulfur dioxide in flares 21Z1 and 34Z1, fiber flash dryer furnace 21B501, and gluten flash dryer 48D101.

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

D.10.4 Flare Pilot Flame

The presence of a flare pilot flame (for flares 21Z1 and 34Z1) shall be monitored using a thermocouple, or any other equivalent device, to detect the presence of a flame.

D.10.5 Scrubber Parametric Monitoring [40 CFR 64]

(a) The Permittee shall monitor and record the pH across scrubber 34V11 at least once per day when digester 34V10 is in operation.

(1) When, for any one reading, the pH across the scrubber is outside ~~of~~ the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pH between 9 and 11.5 unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. A pressure reading that is outside the above mentioned range is not a deviation from this permit.

(2) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A pH reading that is outside the above mentioned range is not a deviation from this

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

(b) The Permittee shall monitor and record the recirculation rate from scrubber 34V11 continuously when emission unit 34V10 is in operation.

(1) From the date of startup until the stack test results are available, the Permittee shall maintain the flow rate at or above the minimum of 70 gallons per minute. If the flow rate falls below 70 gallons per minute, the Permittee shall take a reasonable response.

(2) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Condition D.1~~0~~.1.

(3) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate as observed during the latest compliant stack test. If the flow rate falls below the level observed during the latest compliant stack test, the Permittee shall take a reasonable response.

(4) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A flow rate 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.

(c) The instruments used for determining the 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 or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer's specifications, if used.

D.10.6 Scrubber Failure Detection

In the event that scrubber failure for emission unit 34V10 has been observed:

The biogas shall be routed to the emergency flare (34Z1) 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).

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

D.10.7 Record Keeping Requirements

(a) To document the compliance status with Condition D.11.1, the Permittee shall maintain:

(1) A log of the daily H_2S content before and after scrubber 34V11, temperature, and the total amount of the biogas burned in main flare 21Z1, fiber flash dryer furnace 21B501, gluten flash dryer 48D101, and emergency flare 34Z1.

(2) Records of all calculations used to determine the SO_2 emissions from the combustion of biogas in main flare 21Z1, fiber flash dryer furnace 21B501, gluten flash dryer 48D101, and emergency flare 34Z1.

(b) To document the compliance status with Condition D.10.5, the Permittee shall maintain a daily record of the pH and scrubber recirculation rate from scrubber 34V11 controlling the Wastewater Treatment Anaerobic Digester exhaust. The Permittee shall include in its daily record when a pH or scrubber recirculation rate reading is not taken and the reason for the lack of a pH or scrubber recirculation rate reading (e.g. the process did not operate that day).

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

SECTION D.11 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities

(e) Gasoline fuel transfer dispensing operations handling less than or equal to 1,300 gallons per day and filling storage tanks having a capacity equal to or less than 10,500 gallons:

One (1) storage tank, identified as Tank #3, for storage of gasoline, located east of the Bag Storage Building, with a maximum volume of 1,000 gallons. [326 IAC 8-4-6] [326 IAC 8-4-9]

(j) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2]

(l) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-3-2]

(n) Structural steel and bridge fabrication activities using 80 tons or less of welding consumables. [326 IAC 6-3-2]

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

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

D.11.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the particulate emissions from the brazing equipment, cutting torches, soldering equipment, welding equipment, structural steel and bridge fabrication activities, shall not exceed a pound per hour emission rate established as E in the following formulas:

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

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

or

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

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

D.11.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

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

(1) Equip the degreaser with a cover.

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

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

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

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

(6) Store waste solvent only in closed containers.

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

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

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

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
(B) A water cover when solvent used is insoluble in, and heavier than, water.
(C) A refrigerated chiller.
(D) Carbon adsorption.
(E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.

(2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.

(3) If used, solvent spray:
(A) must be a solid, fluid stream; and
(B) shall be applied at a pressure that does not cause excessive splashing.

D.11.3 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers), on and after January 1, 2015, the Permittee shall not operate a cold cleaning degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

D.11.4 Avoidance Limit for VOC [326 IAC 8-4-6] [326 IAC 8-4-9]

In order to render the requirements of 326 IAC 8-4-6 and 326 IAC 8-4-9 not applicable to the storage tank identified as Tank #3, the monthly gasoline throughput from Tank #3 shall not exceed 10,000 gallons per month. Compliance with the above limit will render the requirements of 326 IAC 8-4-6 and 326 IAC 8-4-9 not applicable to Tank #3.

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

D.11.5 Record Keeping Requirements

(a) To document the compliance status with Condition D.11.4, the Permittee shall maintain monthly records of gasoline throughput from the storage tank identified as Tank #3.

(b) To document the compliance status with Condition D.11.3, on and after January 1, 2015, the Permittee shall maintain the following records for each purchase of solvent used in the cold cleaner degreasing operations. These records shall be retained on-site or accessible electronically for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.

(1) The name and address of the solvent supplier.

(2) The date of purchase.

(3) The type of solvent purchased.

(4) The total volume of the solvent purchased.

(5) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

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

SECTION E.1 FACILITY OPERATION CONDITIONS

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

(c) Feed/Meal/Germ Production Operations, consisting of:

(2) One (1) natural gas or biogas fired Fiber Flash Dryer Furnace, identified as 21B501, constructed in 2007, with a heat input capacity of 60 MMBtu/hr, with emissions uncontrolled, and exhausting to stack 17. This emissions unit is part of Fiber Flash Dryer 21D501 for the purposes of NSPS, 40 CFR 60, Subpart Dc. Under 40 CFR 60, Subpart Dc, this is considered an affected source. [40 CFR 60, Subpart Dc]

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

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

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 for the fiber flash dryer furnace 21B501 except as otherwise specified in 40 CFR Part 60, Subpart Dc.

(b) Pursuant to 40 CFR 60.19, the Permittee shall submit all required notifications and reports to:

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

E.1.2 New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Dc]

The Permittee which engages in steam generation shall comply with the following provisions of 40 CFR Part 60, Subpart Dc, which are incorporated by reference as 326 IAC 12 (included as Attachment A of this permit):

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

SECTION E.2 RESERVED

SECTION E.3 FACILITY OPERATION CONDITIONS

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

Insignificant Activities

(jj) Propylene oxide storage tank and associated distribution system, including

(1) One (1) Propylene Oxide (PO) Tank, identified as 42V1, constructed in 1986, with a capacity of 30,000 gallons.

(2) Distribution system that includes railcar transfer rack, all valves, pumps, and sampling connections associated with the PO distribution system.

Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source.
[40 CFR 63, Subpart EEEE]

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

E.3.1 General Provisions Relating to NESHAP EEEE [326 IAC 20-1] [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.2330, 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, as specified in 40 CFR 63, Subpart EEEE in accordance with Table 12 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

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 National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) [40 CFR Part 63, Subpart EEEE] [326 IAC 20-83]

The Permittee which engages in the distribution of non-gasoline organic liquids shall comply with the following provisions of 40 CFR Part 63, Subpart EEEE (included as Attachment C of this permit):

(a) 40 CFR 63.2330;
(b) 40 CFR 63.2334(a);
(c) 40 CFR 63.2338(a), (b), (c), (f);
(d) 40 CFR 63.2342(b)(1), (d);
(e) 40 CFR 63.2343(b), (c), (d);
(f) 40 CFR 63.2350;
(g) 40 CFR 63.2382(a), (b)(1);

(h) 40 CFR 63.2386(a), (b), (c)(1), (c)(2), (c)(3), (c)(4), (c)(10)(i), (d)(4);
(i) 40 CFR 63.2390(a), (d);
(j) 40 CFR 63.2394;
(k) 40 CFR 63.2398;
(l) 40 CFR 63.2402;
(m) 40 CFR 63.2406;
(n) Table 1 to Subpart EEEE of Part 63; and
(o) Table 11 to Subpart EEEE of Part 63.

SECTION E.4 FACILITY OPERATION CONDITIONS

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

Insignificant Activities

(cc) Emergency generators as follows:

(1) One (1) emergency diesel generator, installed in 1998, identified as Wastewater Treatment Generator, with a maximum capacity of 317 hp. Under 40 CFR 63, Subpart ZZZZ, this is considered an existing affected source. [40 CFR 63, Subpart ZZZZ]

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

E.4.1 General Provisions Relating to NESHAP ZZZZ [326 IAC 20-1] [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.6580, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, as specified in 40 CFR 63, Subpart ZZZZ in accordance with Table 8 in 40 CFR Part 63, Subpart ZZZZ.

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

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

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

The Permittee which engages in the use of a reciprocating internal combustion engine shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment D of this permit):

(a) 40 CFR 63.6580;
(b) 40 CFR 63.6585(a), (b);
(c) 40 CFR 63.6590(a)(1)(ii);
(d) 40 CFR 63.6595(a)(1), (c);
(e) 40 CFR 63.6602;
(f) 40 CFR 63.6605;
(g) 40 CFR 63.6612;
(h) 40 CFR 63.6620;
(i) 40 CFR 63.6625(e)(2), (f), (h), (i), (j);
(j) 40 CFR 63.6635;
(k) 40 CFR 63.6640(a), (b), (f)(1);
(l) 40 CFR 63.6645(a)(5);

(m) 40 CFR 63.6650(a), (b), (c)(1) through (c)(5), (d), (f);
(n) 40 CFR 63.6655(a), (d), (e)(2), (f)(1);
(o) 40 CFR 63.6660;
(p) 40 CFR 63.6665;
(q) 40 CFR 63.6670;
(r) 40 CFR 63.6675;
(s) Table 2c to 40 CFR 63 Subpart ZZZZ;
(t) Table 4 to 40 CFR 63 Subpart ZZZZ; and
(u) Table 6 to 40 CFR 63 Subpart ZZZZ.

SECTION E.5 **NESHAP**

Emissions Unit Description:

(1) Three (3) natural gas-fired boilers, identified as 11B1, 11B2 and 11B3, constructed in 1966, each with a heat input capacity of 125 MMBtu/hr, with emissions uncontrolled, and exhausting to stack 197.

(2) One (1) NG-fired boiler, identified as 31B1, constructed in 1984 and modified in 2004 and approved in 2014 for modification, with a heat input capacity of 231 MMBtu/hr, equipped with four (4) low-NO_x burners, and exhausting to stack 202.

(3) One (1) natural gas or biogas fired Fiber Flash Dryer Furnace, identified as 21B501, constructed in 2007, with a heat input capacity of 60 MMBtu/hr, with emissions uncontrolled, and exhausting to stack 17. This emissions unit is part of Fiber Flash Dryer 21D501 for the purposes of NSPS, 40 CFR 60, Subpart Dc. Under 40 CFR 60, Subpart Dc, this is considered an affected source. [40 CFR 60, Subpart Dc]

(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. 5.1 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 63.7565, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, for the above listed emissions units, as specified in 40 CFR Part 63, Subpart DDDDD, in accordance with the schedule 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 Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

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.5.2 Industrial, Commercial and Institutional Boilers and Process Heaters NESHAP [40 CFR Part 63, Subpart DDDDD] [326 IAC 20-95]

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

(1) 40 CFR 63.7485
(2) 40 CFR 63.7500(a)(1)
(3) 40 CFR 63.7505(a)
(4) 40 CFR 63.7510(a)(2)(ii) & (e)

(5) 40 CFR 63.7515(d)
(6) 40 CFR 63.7521(f)(g)
(7) 40 CFR 63.7530(g)
(8) 40 CFR 63.7540(a)(10)
(9) 40 CFR 63.7540(a)(19)(vii)(c)
(10) 40 CFR 63.7545(b)(c)(e)(h)
(11) 40 CFR 63.7555(g)
(12) 40 CFR 63.7575

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

Source Name:	Tate & Lyle Ingredients Americas LLC
Source Address:	2245 North Sagamore Parkway, Lafayette, Indiana 47904
Part 70 Permit No.:	T157-27029-00003

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: Tate & Lyle Ingredients Americas LLC
Source Address: 2245 North Sagamore Parkway, Lafayette, Indiana 47904
Part 70 Permit No.: T157-27029-00003

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

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

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

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

If any of the following are not applicable, mark N/A **Page 2 of 2**

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

Form Completed by:_______________________________

Title / Position: __________________________________

Date:____

Phone: ____

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

Part 70 Quarterly Report

Source Name: Tate & Lyle Ingredients Americas LLC
Source Address: 2245 North Sagamore Parkway, Lafayette, IN 47904
Part 70 Permit No.: T157-27029-00003
Facility: Starch Modification Operations 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, 45V296, 40Y1, 40V1, 40V50, 40U2, 40V20, 40V21, 40F51, 40F52, 40F53, 40F54, 40V15, 40V16, 40U23, 43V71, 43V72, 43F71, 43F72, 43F73, 43V85, 43V86, 30V1, 30V2, 40V11, 40V12, 40V14, 46V297, 46V201, 46V213, 46V204, 45V117, 45V118, 45V119, 45V120; and Starch Drying and Handling Operations 40D1, 40D20, 43D71, 41D1, 41D2, 41D3, 41D4, 41D5, 41D6, 41D7, 41D8, 30D1, 16D4, 46D200, 19D301, 19D302, and 19D303

Parameter: Propylene oxide (PO) input for propylated starch reactions that do not undergo the acid-kill step

Limit: Fifteen hundred (1,500) tons propylene oxide per twelve consecutive month period with compliance determined at the end of each month.

YEAR: _______________

Month	VOC Usage This Month	VOC Usage Previous 11 Months	VOC Usage 12 Month Total

☐ No deviation occurred in this month.

☐ Deviation/s occurred in this month.
Deviation has been reported on: _____________

Submitted by: ______________________________

Title/Position: ______________________________

Signature: ______________________________

Date: ______________________________

Phone: ______________________________

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

Part 70 Quarterly Report

Source Name:	Tate & Lyle Ingredients Americas LLC
Source Address:	2245 North Sagamore Parkway, Lafayette, IN 47904
Part 70 Permit No.:	T157-27029-00003
Facility:	#4 Starch Flash Dryer
Parameter:	Propylated Starch Production
Limit:	Two hundred and fifty (250) million pounds of propylated starch per twelve consecutive month period with compliance determined at the end of each month.

YEAR: ______________

Month	Propylated Starch Produced This Month	Propylated Starch Produced Previous 11 Months	Propylated Starch Produced 12 Month Total

☐ No deviation occurred in this month.

☐ Deviation/s occurred in this month.
Deviation has been reported on: ____________

Submitted by: ________________________________

Title/Position: ________________________________

Signature: ________________________________

Date: ________________________________

Phone: ________________________________

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

Part 70 Quarterly Report

Source Name: Tate & Lyle Ingredients Americas LLC
Source Address: 2245 North Sagamore Parkway, Lafayette, IN 47904
Part 70 Permit No.: T157-27029-00003
Facility: Propylated Starch Reactors (45V298 and 45V299)
Parameter: Combined throughput
Limit: Sixty (60) million pounds of propylated starch per twelve consecutive month period with compliance determined at the end of each month.

YEAR: ______________

Month	Propylated Starch throughput This Month	Propylated Starch throughput Previous 11 Months	Propylated Starch Throughput 12 Month Total

☐ No deviation occurred in this month.

☐ Deviation/s occurred in this month.
Deviation has been reported on: ____________

Submitted by: ________________________

Title/Position: ________________________

Signature: ________________________

Date: ________________________

Phone: ________________________

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

Part 70 Quarterly Report

Source Name: Tate & Lyle Ingredients Americas LLC
Source Address: 2245 North Sagamore Parkway, Lafayette, IN 47904
Part 70 Permit No.: T157-27029-00003
Facility: Propylated Starch Reactors (45V298 and 45V299)
Parameter: Propylene oxide used in propylated starch reaction that do not undergo the 'acid kill step'
Limit: Four (4) million pounds of propylene oxide per twelve consecutive month period with compliance determined at the end of each month.

YEAR: ______________

Month	Propylene oxide used This Month	Propylene oxide used Previous 11 Months	Propylene oxide used 12 Month Total

☐ No deviation occurred in this month.

☐ Deviation/s occurred in this month.
Deviation has been reported on: _____________

Submitted by: ____________________________________

Title/Position: ____________________________________

Signature: ____________________________________

Date: ____________________________________

Phone: ____________________________________

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Tate & Lyle Ingredients Americas LLC
Source Address: 2245 North Sagamore Parkway, Lafayette, Indiana 47904
Part 70 Permit No.: T157-27029-00003

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 No: T157-27029-00003

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

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

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

§ 60.40c Applicability and delegation of authority.

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

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

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

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

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

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

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

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

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

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

§ 60.41c Definitions.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Natural gas means:

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

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

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

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

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

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

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

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

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

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

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

(1) The equipment is attached to a foundation.

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

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

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

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

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

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

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

§ 60.42c Standard for sulfur dioxide (SO2).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Where:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(j) For affected facilities located in noncontinental areas and affected facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

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

§ 60.43c Standard for particulate matter (PM).

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

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

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

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

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

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

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

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

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

(2) As an alternative to meeting the requirements of paragraph (e)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences modification

after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

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

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

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

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

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

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

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

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

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

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

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

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

$$E_{ho}o = \frac{E_{ho} - E_w(1 - X_1)}{X_1}$$

Where:

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

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

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

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

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

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

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

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

Where:

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

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

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

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

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

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

Where:

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

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

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

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

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

Where:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(ii) [Reserved]

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

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

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

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

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

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

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

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

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

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

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

§ 60.46c Emission monitoring for sulfur dioxide.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

§ 60.47c Emission monitoring for particulate matter.

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

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

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

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

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or

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

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

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

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

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

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

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

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

(e) Owners and operators of an affected facility that is subject to an opacity standard in § 60.43c(c) and that does not use post-combustion technology (except a wet scrubber) for reducing PM, SO_2 , or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur, and is operated such that emissions of CO discharged to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section; or

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

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

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

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

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

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

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

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

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

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

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

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

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

§ 60.48c Reporting and recordkeeping requirements.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(1) Calendar dates covered in the reporting period.

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

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

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

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

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

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

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

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

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

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

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

(1) For distillate oil:

(i) The name of the oil supplier;

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

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

(2) For residual oil:

(i) The name of the oil supplier;

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

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

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

(3) For coal:

(i) The name of the coal supplier;

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

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

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

(4) For other fuels:

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

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

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in § 60.48c(f) to demonstrate compliance with the SO_2 standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in § 60.42C to use fuel certification to demonstrate compliance with the SO_2 standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

(h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under § 60.42c or § 60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

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

Attachment B

Part 70 Operating Permit No: T157-27029-00003

RESERVED

Attachment C

Part 70 Operating Permit No: 157-27029-00003

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 No: 157-27029-00003

[Downloaded from the eCFR on May 13, 2013]

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, dsm^3 /J ($dscf/10^6$ Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3 /J ($dscf/10^6$ Btu)

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent 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 $C_3 H_8$.

Remote stationary RICE means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this paragraph (2), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_X (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

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

Stationary reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011; 78 FR 6706, Jan. 30, 2013]

Table 1 a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE > 500 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

Table 1 b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$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 2 a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O_2. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O_2until 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 2 b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP

As stated in §§ 63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; 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 2 c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following requirement, 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 2 d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§ 63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

For each . . .	You must meet the following requirement, 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, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. reduce CO emissions	i. Measure the O_2at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005).[a c]	(a) Measurements to determine O_2must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device	(1) ASTM D6522-00 (Reapproved 2005) [a b c]or Method 10 of 40 CFR part 60, appendix A	(a) The CO concentration must be at 15 percent O_2, dry basis.
2. 4SRB stationary RICE	a. reduce formaldehyde emissions	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i)	(a) sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005).[a]	(a) measurements to determine O_2concentration must be made at the same time as the measurements for formaldehyde or THC concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03.[a]	(a) measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration.
		iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formaldehyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03,[a]provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device	(1) Method 25A, reported as propane, of 40 CFR part 60, appendix A	(a) THC concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
3. Stationary RICE	a. limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i)	(a) if using a control device, the sampling site must be located at the outlet of the control device.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		ii. Determine the O_2concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005).[a]	(a) measurements to determine O_2concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03.[a]	(a) measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03,[a]provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. measure CO at the exhaust of the stationary RICE.	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00 (2005),[a] [c]Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03.[a]	(a) CO concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

[a] Incorporated by reference, see 40 CFR 63.14. You may also obtain copies from University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[b] You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03.

[c] ASTM-D6522-00 (2005) may be used to test both CI and SI stationary RICE.

[78 FR 6711, Jan. 30, 2013]

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.
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.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
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_2or CO_2at 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_2or CO_2at 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
		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

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		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.
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;

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), 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
		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.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
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.
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.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
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											
"											
"											
"											
"											
"											
"											
"											
"											
"											
"											
Mean											
Refresh Phase											
"											
"											
"											
"											

[78 FR 6721, Jan. 30, 2013]

Attachment E

Part 70 Operating Permit No: T157-27029-00003

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.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} \left(Er \times Sa \times Cfi\right) \div \sum_{i=1}^{n} \left(Sa \times Cfi\right) \quad \text{(Eq. 4)}$$

Where:

AveWeightedEmissions = average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Sa = Actual steam generation for that calendar month by boiler, i, in units of pounds.

Cfi = Conversion factor, as calculated during the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for boiler, i.

1.1 = Required discount factor.

(3) Until 12 monthly weighted average emission rates have been accumulated, calculate and report only the average weighted emission rate determined under paragraph (f)(1) or (2) of this section for each calendar month. After 12 monthly weighted average emission rates have been accumulated, for each subsequent calendar month, use Equation 5 of this section to calculate the 12-month rolling average of the monthly weighted average emission rates for the current calendar month and the previous 11 calendar months.

$$Eavg = \sum_{i=1}^{n} ERi \div 12 \quad \text{(Eq. 5)}$$

Where:

Eavg = 12-month rolling average emission rate, (pounds per million Btu heat input)

ERi = Monthly weighted average, for calendar month “i” (pounds per million Btu heat input), as calculated by paragraph (f)(1) or (2) of this section.

(g) You must develop, and submit upon request to the applicable Administrator for review and approval, an implementation plan for emission averaging according to the following procedures and requirements in paragraphs (g)(1) through (4) of this section.

(1) You must submit the implementation plan no later than 180 days before the date that the facility intends to demonstrate compliance using the emission averaging option.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vii) of this section in your implementation plan for all emission sources included in an emissions average:

(i) The identification of all existing boilers and process heaters in the averaging group, including for each either the applicable HAP emission level or the control technology installed as of January 31, 2013 and the date on which you are requesting emission averaging to commence;

(ii) The process parameter (heat input or steam generated) that will be monitored for each averaging group;

(iii) The specific control technology or pollution prevention measure to be used for each emission boiler or process heater in the averaging group and the date of its installation or application. If the pollution prevention measure reduces or eliminates emissions from multiple boilers or process heaters, the owner or operator must identify each boiler or process heater;

(iv) The test plan for the measurement of PM (or TSM), HCl, or mercury emissions in accordance with the requirements in § 63.7520;

(v) The operating parameters to be monitored for each control system or device consistent with § 63.7500 and Table 4, and a description of how the operating limits will be determined;

(vi) If you request to monitor an alternative operating parameter pursuant to § 63.7525, you must also include:

(A) A description of the parameter(s) to be monitored and an explanation of the criteria used to select the parameter(s); and

(B) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device; the frequency and content of monitoring, reporting, and recordkeeping requirements; and a demonstration, to the satisfaction of the Administrator, that the proposed monitoring frequency is sufficient to represent control device operating conditions; and

(vii) A demonstration that compliance with each of the applicable emission limit(s) will be achieved under representative operating load conditions. Following each compliance demonstration and until the next compliance demonstration, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(3) The Administrator shall review and approve or disapprove the plan according to the following criteria:

(i) Whether the content of the plan includes all of the information specified in paragraph (g)(2) of this section; and

(ii) Whether the plan presents sufficient information to determine that compliance will be achieved and maintained.

(4) The applicable Administrator shall not approve an emission averaging implementation plan containing any of the following provisions:

(i) Any averaging between emissions of differing pollutants or between differing sources; or

(ii) The inclusion of any emission source other than an existing unit in the same subcategories.

(h) For a group of two or more existing affected units, each of which vents through a single common stack, you may average PM (or TSM), HCl, or mercury emissions to demonstrate compliance with the limits for that pollutant in Table 2 to this subpart if you satisfy the requirements in paragraph (i) or (j) of this section.

(i) For a group of two or more existing units in the same subcategories, each of which vents through a common emissions control system to a common stack, that does not receive emissions from units in other subcategories or categories, you may treat such averaging group as a single existing unit for purposes of this subpart and comply with the requirements of this subpart as if the group were a single unit.

(j) For all other groups of units subject to the common stack requirements of paragraph (h) of this section, including situations where the exhaust of affected units are each individually controlled and then sent to a common stack, the owner or operator may elect to:

(1) Conduct performance tests according to procedures specified in § 63.7520 in the common stack if affected units from other subcategories vent to the common stack. The emission limits that the group must comply with are determined by the use of Equation 6 of this section.

$$En = \sum_{i=1}^{n}(ELi \times Hi) \div \sum_{i=1}^{n} Hi \qquad \text{(Eq. 6)}$$

Where:

En = HAP emission limit, pounds per million British thermal units (lb/MMBtu), parts per million (ppm), or nanograms per dry standard cubic meter (ng/dscm).

ELi = Appropriate emission limit from Table 2 to this subpart for unit i, in units of lb/MMBtu, ppm or ng/dscm.

Hi = Heat input from unit i, MMBtu.

(2) Conduct performance tests according to procedures specified in § 63.7520 in the common stack. If affected units and non-affected units vent to the common stack, the non-affected units must be shut down or vented to a different stack during the performance test unless the facility determines to demonstrate compliance with the non-affected units venting to the stack; and

(3) Meet the applicable operating limit specified in § 63.7540 and Table 8 to this subpart for each emissions control system (except that, if each unit venting to the common stack has an applicable opacity operating limit, then a single continuous opacity monitoring system may be located in the common stack instead of in each duct to the common stack).

(k) The common stack of a group of two or more existing boilers or process heaters in the same subcategories subject to paragraph (h) of this section may be treated as a separate stack for purposes of paragraph (b) of this section and included in an emissions averaging group subject to paragraph (b) of this section.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7168, Jan. 31, 2013]

§ 63.7525 What are my monitoring, installation, operation, and maintenance requirements?

(a) If your boiler or process heater is subject to a CO emission limit in Tables 1, 2, or 11 through 13 to this subpart, you must install, operate, and maintain an oxygen analyzer system, as defined in § 63.7575, or install, certify, operate and maintain continuous emission monitoring systems for CO and oxygen according to the procedures in paragraphs (a)(1) through (7) of this section.

(1) Install the CO CEMS and oxygen analyzer by the compliance date specified in § 63.7495. The CO and oxygen levels shall be monitored at the same location at the outlet of the boiler or process heater.

(2) To demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, you must install, certify, operate, and maintain a CO CEMS and an oxygen analyzer according to the applicable procedures under Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, the site-specific monitoring plan developed according to § 63.7505(d), and the requirements in § 63.7540(a)(8) and paragraph (a) of this section. Any boiler or process heater that has a CO CEMS that is compliant with Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, a site-specific monitoring plan developed according to § 63.7505(d), and the requirements in § 63.7540(a)(8) and paragraph (a) of this section must use the CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart.

(i) You must conduct a performance evaluation of each CO CEMS according to the requirements in § 63.8(e) and according to Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B.

(ii) During each relative accuracy test run of the CO CEMS, you must be collect emission data for CO concurrently (or within a 30- to 60-minute period) by both the CO CEMS and by Method 10, 10A, or 10B at 40 CFR part 60, appendix A-4. The relative accuracy testing must be at representative operating conditions.

(iii) You must follow the quality assurance procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) of Procedure 1 of appendix F to part 60. The measurement span value of the CO CEMS must be two times the applicable CO emission limit, expressed as a concentration.

(iv) Any CO CEMS that does not comply with § 63.7525(a) cannot be used to meet any requirement in this subpart to demonstrate compliance with a CO emission limit listed in Tables 1, 2, or 11 through 13 to this subpart.

(v) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(3) Complete a minimum of one cycle of CO and oxygen CEMS operation (sampling, analyzing, and data recording) for each successive 15-minute period. Collect CO and oxygen data concurrently. Collect at least four CO and oxygen CEMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CEMS calibration, quality assurance, or maintenance activities are being performed.

(4) Reduce the CO CEMS data as specified in § 63.8(g)(2).

(5) Calculate one-hour arithmetic averages, corrected to 3 percent oxygen from each hour of CO CEMS data in parts per million CO concentration. The one-hour arithmetic averages required shall be used to calculate the 30-day or 10-day rolling average emissions. Use Equation 19-19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A-7 for calculating the average CO concentration from the hourly values.

(6) For purposes of collecting CO data, operate the CO CEMS as specified in § 63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in § 63.7535(c). Periods when CO data are unavailable may constitute monitoring deviations as specified in § 63.7535(d).

(7) Operate an oxygen trim system with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test as the operating limit for oxygen according to Table 7 to this subpart.

(b) If your boiler or process heater is in the unit designed to burn coal/solid fossil fuel subcategory or the unit designed to burn heavy liquid subcategory and has an average annual heat input rate greater than 250 MMBtu per hour from solid fossil fuel and/or heavy liquid, and you demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, certify, maintain, and operate a PM CPMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (b)(1) through (4) of this section. As an alternative to use of a PM CPMS to demonstrate compliance with the PM limit, you may choose to use a PM CEMS. If you choose to use a PM CEMS to demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, certify, maintain, and operate a PM CEMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraph (b)(5) through (8) of this section. For other boilers or process heaters, you may elect to use a PM CPMS or PM CEMS operated in accordance with this section in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure). Owners of boilers and process heaters who elect to comply with the alternative TSM limit are not required to install a PM CPMS.

(1) Install, certify, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with § 63.7505(d), the requirements in § 63.7540(a)(9), and paragraphs (b)(1)(i) through (iii) of this section.

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation detection of PM in the exhaust gas or representative exhaust gas sample. The reportable measurement output from the PM CPMS must be expressed as milliamps.

(ii) The PM CPMS must have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.

(iii) The PM CPMS must be capable of detecting and responding to PM concentrations of no greater than 0.5 milligram per actual cubic meter.

(2) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(3) Collect PM CPMS hourly average output data for all boiler or process heater operating hours except as indicated in § 63.7535(a) through (d). Express the PM CPMS output as milliamps.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output data collected during all boiler or process heater operating hours (milliamps).

(5) Install, certify, operate, and maintain your PM CEMS according to the procedures in your approved site-specific monitoring plan developed in accordance with § 63.7505(d), the requirements in § 63.7540(a)(9), and paragraphs (b)(5)(i) through (iv) of this section.

(i) You shall conduct a performance evaluation of the PM CEMS according to the applicable requirements of § 60.8(e), and Performance Specification 11 at 40 CFR part 60, appendix B of this chapter.

(ii) During each PM correlation testing run of the CEMS required by Performance Specification 11 at 40 CFR part 60, appendix B of this chapter, you shall collect PM and oxygen (or carbon dioxide) data concurrently (or within a 30-to 60-minute period) by both the CEMS and conducting performance tests using Method 5 at 40 CFR part 60, appendix A-3 or Method 17 at 40 CFR part 60, appendix A-6 of this chapter.

(iii) You shall perform quarterly accuracy determinations and daily calibration drift tests in accordance with Procedure 2 at 40 CFR part 60, appendix F of this chapter. You must perform Relative Response Audits annually and perform Response Correlation Audits every 3 years.

(iv) Within 60 days after the date of completing each CEMS relative accuracy test audit or performance test conducted to demonstrate compliance with this subpart, you must submit the relative accuracy test audit data and performance test data to the EPA by successfully submitting the data electronically into the EPA's Central Data Exchange by using the Electronic Reporting Tool (see *http://www.epa.gov/ttn/chief/ert/erttool.html/*).

(6) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(7) Collect PM CEMS hourly average output data for all boiler or process heater operating hours except as indicated in § 63.7535(a) through (d).

(8) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all boiler or process heater operating hours.

(c) If you have an applicable opacity operating limit in this rule, and are not otherwise required or elect to install and operate a PM CPMS, PM CEMS, or a bag leak detection system, you must install, operate, certify and maintain each COMS according to the procedures in paragraphs (c)(1) through (7) of this section by the compliance date specified in § 63.7495.

(1) Each COMS must be installed, operated, and maintained according to Performance Specification 1 at appendix B to part 60 of this chapter.

(2) You must conduct a performance evaluation of each COMS according to the requirements in § 63.8(e) and according to Performance Specification 1 at appendix B to part 60 of this chapter.

(3) As specified in § 63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) The COMS data must be reduced as specified in § 63.8(g)(2).

(5) You must include in your site-specific monitoring plan procedures and acceptance criteria for operating and maintaining each COMS according to the requirements in § 63.8(d). At a minimum, the monitoring plan must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS.

(6) You must operate and maintain each COMS according to the requirements in the monitoring plan and the requirements of § 63.8(e). You must identify periods the COMS is out of control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit. Any 6-minute period for which the monitoring system is out of control and data are not available for a required calculation constitutes a deviation from the monitoring requirements.

(7) You must determine and record all the 6-minute averages (and daily block averages as applicable) collected for periods during which the COMS is not out of control.

(d) If you have an operating limit that requires the use of a CMS other than a PM CPMS or COMS, you must install, operate, and maintain each CMS according to the procedures in paragraphs (d)(1) through (5) of this section by the compliance date specified in § 63.7495.

(1) The CPMS must complete a minimum of one cycle of operation every 15-minutes. You must have a minimum of four successive cycles of operation, one representing each of the four 15-minute periods in an hour, to have a valid hour of data.

(2) You must operate the monitoring system as specified in § 63.7535(b), and comply with the data calculation requirements specified in § 63.7535(c).

(3) Any 15-minute period for which the monitoring system is out-of-control and data are not available for a required calculation constitutes a deviation from the monitoring requirements. Other situations that constitute a monitoring deviation are specified in § 63.7535(d).

(4) You must determine the 30-day rolling average of all recorded readings, except as provided in § 63.7535(c).

(5) You must record the results of each inspection, calibration, and validation check.

(e) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (d) and (e)(1) through (4) of this section.

(1) You must install the flow sensor and other necessary equipment in a position that provides a representative flow.

(2) You must use a flow sensor with a measurement sensitivity of no greater than 2 percent of the design flow rate.

(3) You must minimize, consistent with good engineering practices, the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(4) You must conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(f) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (d) and (f)(1) through (6) of this section.

(1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (*e.g.* , PM scrubber pressure drop).

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion consistent with good engineering practices.

(3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.

(4) Perform checks at least once each process operating day to ensure pressure measurements are not obstructed (*e.g.* , check for pressure tap pluggage daily).

(5) Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in you monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(g) If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (d) and (g)(1) through (4) of this section.

(1) Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH.

(2) Ensure the sample is properly mixed and representative of the fluid to be measured.

(3) Conduct a performance evaluation of the pH monitoring system in accordance with your monitoring plan at least once each process operating day.

(4) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than quarterly.

(h) If you have an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator (ESP) operated with a wet scrubber, you must meet the requirements in paragraphs (h)(1) and (2) of this section.

(1) Install sensors to measure (secondary) voltage and current to the precipitator collection plates.

(2) Conduct a performance evaluation of the electric power monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(i) If you have an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (d) and (i)(1) through (2) of this section.

(1) Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate.

(2) Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(j) If you are not required to use a PM CPMS and elect to use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate the bag leak detection system as specified in paragraphs (j)(1) through (6) of this section.

(1) You must install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute PM loadings for each exhaust stack, roof vent, or compartment (e.g., for a positive pressure fabric filter) of the fabric filter.

(2) Conduct a performance evaluation of the bag leak detection system in accordance with your monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (incorporated by reference, see § 63.14).

(3) Use a bag leak detection system certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter or less.

(4) Use a bag leak detection system equipped with a device to record continuously the output signal from the sensor.

(5) Use a bag leak detection system equipped with a system that will alert plant operating personnel when an increase in relative PM emissions over a preset level is detected. The alert must easily recognizable (e.g., heard or seen) by plant operating personnel.

(6) Where multiple bag leak detectors are required, the system's instrumentation and alert may be shared among detectors.

(k) For each unit that meets the definition of limited-use boiler or process heater, you must keep fuel use records for the days the boiler or process heater was operating.

(l) For each unit for which you decide to demonstrate compliance with the mercury or HCl emissions limits in Tables 1 or 2 or 11 through 13 of this subpart by use of a CEMS for mercury or HCl, you must install, certify, maintain, and operate a CEMS measuring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (l)(1) through (8) of this section. For HCl, this option for an affected unit takes effect on the date a final performance specification for a HCl CEMS is published in the Federal Register or the date of approval of a site-specific monitoring plan.

(1) Notify the Administrator one month before starting use of the CEMS, and notify the Administrator one month before stopping use of the CEMS.

(2) Each CEMS shall be installed, certified, operated, and maintained according to the requirements in § 63.7540(a)(14) for a mercury CEMS and § 63.7540(a)(15) for a HCl CEMS.

(3) For a new unit, you must complete the initial performance evaluation of the CEMS by the latest of the dates specified in paragraph (l)(3)(i) through (iii) of this section.

(i) No later than July 30, 2013.

(ii) No later 180 days after the date of initial startup.

(iii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(4) For an existing unit, you must complete the initial performance evaluation by the latter of the two dates specified in paragraph (l)(4)(i) and (ii) of this section.

(i) No later than July 29, 2016.

(ii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(5) Compliance with the applicable emissions limit shall be determined based on the 30-day rolling average of the hourly arithmetic average emissions rates using the continuous monitoring system outlet data. The 30-day rolling arithmetic average emission rate (lb/MMBtu) shall be calculated using the equations in EPA Reference Method 19 at 40 CFR part 60, appendix A-7, but substituting the mercury or HCl concentration for the pollutant concentrations normally used in Method 19.

(6) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis. Collect at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

(7) The one-hour arithmetic averages required shall be expressed in lb/MMBtu and shall be used to calculate the boiler 30-day and 10-day rolling average emissions.

(8) You are allowed to substitute the use of the PM, mercury or HCl CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with the PM, mercury or HCl emissions limit, and if you are using an acid gas wet scrubber or dry sorbent injection control technology to comply with the HCl emission limit, you are allowed to substitute the use of a sulfur dioxide (SO_2) CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with HCl emissions limit.

(m) If your unit is subject to a HCl emission limit in Tables 1, 2, or 11 through 13 of this subpart and you have an acid gas wet scrubber or dry sorbent injection control technology and you use an SO_2 CEMS, you must install the monitor at the outlet of the boiler or process heater, downstream of all emission control devices, and you must install, certify, operate, and maintain the CEMS according to part 75 of this chapter.

(1) The SO_2 CEMS must be installed by the compliance date specified in § 63.7495.

(2) For on-going quality assurance (QA), the SO_2 CEMS must meet the applicable daily, quarterly, and semiannual or annual requirements in sections 2.1 through 2.3 of appendix B to part 75 of this chapter, with the following addition: You must perform the linearity checks required in section 2.2 of appendix B to part 75 of this chapter if the SO_2 CEMS has a span value of 30 ppm or less.

(3) For a new unit, the initial performance evaluation shall be completed no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, the initial performance evaluation shall be completed no later than July 29, 2016.

(4) For purposes of collecting SO_2 data, you must operate the SO_2 CEMS as specified in § 63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in § 63.7535(c). Periods when SO_2 data are unavailable may constitute monitoring deviations as specified in § 63.7535(d).

(5) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis.

(6) Use only unadjusted, quality-assured SO_2 concentration values in the emissions calculations; do not apply bias adjustment factors to the part 75 SO_2 data and do not use part 75 substitute data values.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7171, Jan. 31, 2013]

§ 63.7530 How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?

(a) You must demonstrate initial compliance with each emission limit that applies to you by conducting initial performance tests and fuel analyses and establishing operating limits, as applicable, according to § 63.7520, paragraphs (b) and (c) of this section, and Tables 5 and 7 to this subpart. The requirement to conduct a fuel analysis is not applicable for units that burn a single type of fuel, as specified by § 63.7510(a)(2)(i). If applicable, you must also install, operate, and maintain all applicable CMS (including CEMS, COMS, and CPMS) according to § 63.7525.

(b) If you demonstrate compliance through performance testing, you must establish each site-specific operating limit in Table 4 to this subpart that applies to you according to the requirements in § 63.7520, Table 7 to this subpart, and paragraph (b)(4) of this section, as applicable. You must also conduct fuel analyses according to § 63.7521 and establish maximum fuel pollutant input levels according to paragraphs (b)(1) through (3) of this section, as applicable, and as specified in § 63.7510(a)(2). (Note that § 63.7510(a)(2) exempts certain fuels from the fuel analysis requirements.) However, if you switch fuel(s) and cannot show that the new fuel(s) does (do) not increase the chlorine, mercury, or TSM input into the unit through the results of fuel analysis, then you must repeat the performance test to demonstrate compliance while burning the new fuel(s).

(1) You must establish the maximum chlorine fuel input (Clinput) during the initial fuel analysis according to the procedures in paragraphs (b)(1)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of chlorine.

(ii) During the fuel analysis for hydrogen chloride, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of chlorine, and the average chlorine concentration of each fuel type burned (Ci).

(iii) You must establish a maximum chlorine input level using Equation 7 of this section.

$$Clinput = \sum_{i=1}^{n} (Ci \times Qi) \quad \text{(Eq. 7)}$$

Where:

Clinput = Maximum amount of chlorine entering the boiler or process heater through fuels burned in units of pounds per million Btu.

Ci = Arithmetic average concentration of chlorine in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

(2) You must establish the maximum mercury fuel input level (Mercuryinput) during the initial fuel analysis using the procedures in paragraphs (b)(2)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of mercury.

(ii) During the compliance demonstration for mercury, you must determine the fraction of total heat input for each fuel burned (Qi) based on the fuel mixture that has the highest content of mercury, and the average mercury concentration of each fuel type burned (HGi).

(iii) You must establish a maximum mercury input level using Equation 8 of this section.

$$Mercuryinput = \sum_{i=1}^{n} (HGi \times Qi) \quad \text{(Eq. 8)}$$

Where:

Mercuryinput = Maximum amount of mercury entering the boiler or process heater through fuels burned in units of pounds per million Btu.

HGi = Arithmetic average concentration of mercury in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types during the performance test, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of mercury.

(3) If you opt to comply with the alternative TSM limit, you must establish the maximum TSM fuel input (TSMinput) for solid or liquid fuels during the initial fuel analysis according to the procedures in paragraphs (b)(3)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of TSM.

(ii) During the fuel analysis for TSM, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of TSM, and the average TSM concentration of each fuel type burned (TSMi).

(iii) You must establish a maximum TSM input level using Equation 9 of this section.

$$TSMinput = \sum_{i=1}^{n} (TSMi \times Qi) \qquad \text{(Eq. 9)}$$

Where:

TSMinput = Maximum amount of TSM entering the boiler or process heater through fuels burned in units of pounds per million Btu.

TSMi = Arithmetic average concentration of TSM in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of TSM. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of TSM.

(4) You must establish parameter operating limits according to paragraphs (b)(4)(i) through (ix) of this section. As indicated in Table 4 to this subpart, you are not required to establish and comply with the operating parameter limits when you are using a CEMS to monitor and demonstrate compliance with the applicable emission limit for that control device parameter.

(i) For a wet acid gas scrubber, you must establish the minimum scrubber effluent pH and liquid flow rate as defined in § 63.7575, as your operating limits during the performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for HCl and mercury emissions, you must establish one set of minimum scrubber effluent pH, liquid flow rate, and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate operating limit at the higher of the minimum values established during the performance tests.

(ii) For any particulate control device (e.g., ESP, particulate wet scrubber, fabric filter) for which you use a PM CPMS, you must establish your PM CPMS operating limit and determine compliance with it according to paragraphs (b)(4)(ii)(A) through (F) of this section.

(A) Determine your operating limit as the average PM CPMS output value recorded during the most recent performance test run demonstrating compliance with the filterable PM emission limit or at the PM CPMS output value corresponding to 75 percent of the emission limit if your PM performance test demonstrates compliance below 75 percent of the emission limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(*1*) Your PM CPMS must provide a 4-20 milliamp output and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps.

(*2*) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to at least two times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit.

(*3*) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all your PM CPMS output values for three corresponding 2-hour Method 5I test runs).

(B) If the average of your three PM performance test runs are below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or performance test with the procedures in paragraphs (b)(4)(ii)(B)(*1*) through (*4*) of this section.

(*1*) Determine your instrument zero output with one of the following procedures:

(*i*) Zero point data for *in-situ* instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench.

(*ii*) Zero point data for *extractive* instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air.

(*iii*) The zero point may also be established by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept.

(*iv*) If none of the steps in paragraphs (b)(4)(ii)(B)(*1*)(*i*) through (*iii*) of this section are possible, you must use a zero output value provided by the manufacturer.

(*2*) Determine your PM CPMS instrument average in milliamps, and the average of your corresponding three PM compliance test runs, using equation 10.

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} X_1, \bar{y} = \frac{1}{n}\sum_{i=1}^{n} Y_1 \qquad \text{(Eq. 10)}$$

Where:

X_1 = the PM CPMS data points for the three runs constituting the performance test,

Y_1 = the PM concentration value for the three runs constituting the performance test, and

n = the number of data points.

(*3*) With your instrument zero expressed in milliamps, your three run average PM CPMS milliamp value, and your three run average PM concentration from your three compliance tests, determine a relationship of lb/MMBtu per milliamp with equation 11.

$$R = \frac{Y_1}{(X_1 - z)} \quad \text{(Eq. 11)}$$

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.

$$O_l = z + \frac{0.75(L)}{R} \quad \text{(Eq. 12)}$$

Where:

O_l = the operating limit for your PM CPMS on a 30-day rolling average, in milliamps.

L = your source emission limit expressed in lb/MMBtu,

z = your instrument zero in milliamps, determined from (B)(i), and

R = the relative lb/MMBtu per milliamp for your PM CPMS, from Equation 11.

(C) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your 30-day rolling average operating limit by averaging the PM CPMS milliamp output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using equation 13 and you must submit all compliance test and PM CPMS data according to the reporting requirements in paragraph (b)(4)(ii)(F) of this section.

$$O_h = \frac{1}{n}\sum_{i=1}^{n} X_1 \quad \text{(Eq. 13)}$$

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]

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (ATSD) for a Part 70 Significant Source Modification and Significant Permit Modification

Source Background and Description

Source Name:	Tate & Lyle Ingredients Americas LLC
Source Location:	2245 North Sagamore Parkway, Lafayette, IN 47904
County:	Tippecanoe
SIC Code:	2046
Operation Permit No.:	T157-27029-00003
Operation Permit Issuance Date:	July 3, 2012
Significant Source Modification No.:	157-34094-00003
Significant Permit Modification No.:	157-34105-00003
Permit Reviewer:	Ghassan Shalabi

On August 22, 2014, the Office of Air Quality (OAQ) had a notice published in Journal and Courier, Lafayette, Indiana, stating that Tate & Lyle Ingredients Americas LLC had applied for a Significant Source Modification and Significant Permit Modification to implement several projects including a wet milling yield improvement project, the construction of several new starch drying systems, and the permanent conversion of the existing coal (CoGen) boiler to natural gas firing. The notice also stated that the OAQ proposed to issue a Significant Source Modification and Significant Permit Modification for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments and Responses

On August 20, 2014, Tate & Lyle Ingredients Americas LLC submitted comments to IDEM, OAQ on the draft Significant Source Modification and Significant Permit Modification.

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

Comment 1:

The table below provides information on corrections to the Public Notice Draft Permit that should be made before issuance of the SPM and SSM. Tate & Lyle believes these changes are non-controversial.

Page	Description of Correction Needed	Recommended Change
18	In Items A.2(e)(41)-(44), the phrase “all other emissions are uncontrolled” is repeated.	The repeated phrase should be deleted from each of those items.
64	Item D.2(b)(20) is missing but was included in the previously issued Part 70 permit renewal. The item (First Grind Receiver Tank) identified as D.2(b)(20) is actually D.2(b)(21).	Add item description (2nd Grind Dewatering Screens) as included under Section A.2(b)(20) of the Public Notice draft permit.
89	In Items D.5(e)(41)-(44), the phrase “all other emissions are uncontrolled” is repeated.	The repeated phrase should be deleted from each of those items.
117	Item D.7.8(k) should be revised from “Product Bins #3, #2, and #1” to read “Product Bins #1, #2, and #3” to	Item D.7.8(k) should be revised to read “…three(3) Product Bins #1, #2, and #3

	ensure the consecutive bin order agrees with the associated bins. The tag numbers listed (07F73, 07F72, and 07F71) refer to the bin vent filter tag numbers rather than the bins themselves. The correct tag numbers for Bins #1, #2, & #3 are 07V50, 07V49, & 07V48.	identified as 0750, 07V49, and 07V48 the Permittee..."
119	Item D.7.10(d)(2) incorrectly references Condition D.8.4(f).	Item D.7.10(d)(2) should reference condition D.7.4(f) rather than D.8.4(f).
120	In Item D.7.10(e), the references to the Flash Dryer #4 dryer and scrubber are both incorrect and reversed. The tag number for the scrubber is 54F460 and the tag number for the flash dryer is 54D450.	Item D.7.10(e) should be revised to read "The Permittee shall monitor and record the recirculation rate from scrubber 54F460 continuously wen emission unit 54D450 is in operation."
121	In Item D.7.14(b), stack 104 should be deleted because the emission unit is being permanently shut down (Belts Product Conveying Mill Product to Bins #1 and #2 – 7F26).	In D.7.14(b), delete "104" from the list of stacks requiring daily records of visible emissions notations.
122	Item D.7.15(a) should not reference Condition D.7.3(m)(1) since this condition does not exist (the actual reference is D.7.3(g)(2) which is already listed).	Delete "D.7.3(m)(1)" from Condition D.7.15(a).
134	In Section D.9.5(a) the references to Conditions D.10.1(a) and D.10.1(b) are incorrect and should be changed to D.9.1(a) and D.9.1(b).	Change condition to read "Conditions D.9.1(a) and D.9.1(b)". Note that Tate & Lyle believes this PM testing requirement should be deleted following conversion of the coal boiler to natural gas.
135	Section D.10.18 of the previous permit has been deleted in its entirety (Section D.10 is now Section D.9). Previously, Condition D.10.18(b) required that a Natural Gas Certification form be provided on a semi-annual basis. Natural gas will be the only fuel burned in the Sagamore boilers.	This Natural Gas Certification form continues to be attached to the end of the permit (see p. 154) and should be removed.
138	In Section D.10.7(a), the reference to Condition D.11.1 is incorrect and should be changed to D.10.1.	Change Condition D.10.7(a) to read "… status with Condition D.10.1,…".

Response to Comment 1:

IDEM agrees with all the recommended changes. The permit has been revised as follows:

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:

***

(e) Starch Modification Operations, consisting of:

***

(41) One (1) Flash 4 Larox Filter Feed Tank, identified as 54V403, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), ~~all other emissions are uncontrolled,~~ all other emissions are uncontrolled, and exhausting to stack 420.

(42) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F421/54V421, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), ~~all other emissions are uncontrolled,~~ all other emissions are uncontrolled, and exhausting to stack 421.

(43) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F422/54V422, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), ~~all other emissions are uncontrolled,~~ all other emissions are uncontrolled, and exhausting to stack 422.

(44) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F4MM/54V4MM, approved in 2014 for construction with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), ~~all other emissions are uncontrolled,~~ all other emissions are uncontrolled, and exhausting to stack 423.

***

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b) Wet Milling Operations, consisting of:

***

(20) Two (2) Second Grind Dewatering Screens, identified as 15J14 and 15J3, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(2~~0~~**1**) One (1) First Grind Receiver Tank, identified as 15V22, constructed in 1966, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

***

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

***

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(e) Starch Modification Operations, consisting of:

***

(41) One (1) Flash 4 Larox Filter Feed Tank, identified as 54V403, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), ~~all other emissions are uncontrolled,~~ all other emissions are uncontrolled, and exhausting to stack 420.

(42) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F421/54V421,

approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), ~~all other emissions are uncontrolled,~~ all other emissions are uncontrolled, and exhausting to stack 421.

(43) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F422/54V422, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), ~~all other emissions are uncontrolled,~~ all other emissions are uncontrolled, and exhausting to stack 422.

(44) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F4MM/54V4MM, approved in 2014 for construction with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), ~~all other emissions are uncontrolled,~~ all other emissions are uncontrolled, and exhausting to stack 423.

***

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

***

D.7.8 Testing Requirements [326 IAC 2-1.1-11]

***

(k) In order to demonstrate compliance with Conditions D.7.3(k), (l), and (m), and Condition D.7.3(n), (o), and (p), not later than 180 days after the startup of the three (3) Product Storage Bins, identified as 54V440, 54V441, 54V4CC or the three (3) Product Bins #~~3~~**1**, #2, #~~1~~**3**, identified as 07F~~73~~**50**, 07F~~72~~**49**, and 07F~~71~~**48** the Permittee shall perform PM, PM10, and PM2.5 testing on one of the six (6) bin vent filters controlling these units utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration and the unit tested shall be the unit in which the longest amount of time has elapsed since its previous test. PM_{10} and $PM_{2.5}$ includes both filterable and condensable PM.

***

D.7.10 Scrubber Parametric Monitoring [40 CFR 64]

***

(d) The Permittee shall monitor and record the recirculation rate from scrubbers 16F26, 17F78 at least once per day when emission units and 16D4 are in operation.

***

(2) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Conditions D.~~8~~**7**.4(f).

***

(e) The Permittee shall monitor and record the recirculation rate from scrubber 54~~D~~**F**460 continuously when emission unit 54~~F~~**D**450 is in operation.

***

***

***

D.7.14 Record Keeping Requirements

(a) ***

(b) To document the compliance status with Condition D.7.9, the Permittee shall maintain a daily record of visible emission notations of stacks 69, 73, 177, 265, 360, 361, 70, 71, 72, 76, 77, 78, 87, 88, 89, 90, 103, ~~104,~~ 105, 106, 107, 108, 109, 146, 147, 226, 248, 255, 266, 267, 268, 269, 274, 345, 346, 355, 361, 366, 385, 386, 387, 388, 389, 401, 402, and 432 controlling the Starch Drying and Handling Operation exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

***

D.7.15 Reporting Requirements

(a) A quarterly report of the combined propylene oxide input to document the compliance status with Conditions D.7.1(e)(2), D.7.3(a)(2), D.7.3(g)(2), ~~D.7.3(m)(1),~~ and D.7.5(b) shall be submitted not later than thirty (30) days after the end of the quarter being reported.

***

D.9.5 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.~~10~~**9**.1(a) and D.~~10~~**9**.1(b), the Permittee shall perform PM testing of emission unit 31B1 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 obligations with regard to the performance testing required by this condition.

***

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

~~PART 70 OPERATING PERMIT~~
~~SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION~~

~~Source Name:~~ ~~Tate & Lyle Ingredients Americas LLC~~
~~Source Address:~~ ~~2245 North Sagamore Parkway, Lafayette, Indiana 47904~~
~~Part 70 Permit No.:~~ ~~T157-27029-00003~~

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

~~Report period~~

~~Beginning:~~ ______________________________

~~Ending:~~

~~Boiler Affected~~	~~Alternate Fuel~~	~~Days burning alternate fuel From~~	~~To~~

~~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:~~

Comment 2:

Condition D.7.8(j) on page 117 of the draft permit requires PM, PM10 and PM2.5 testing of the Starch Densifier Mill Surge Hopper (54V470). The allowable emission rate in Conditions D.7.3(h)-(j) is only 0.02 lbs/hr PM/PM10 and 0.01 lbs/hr PM2.5. This rate is considerably less than other bagfilters permitted as part of the starch dryer and packer expansion in Sections D.7 and D.8. Tate & Lyle requests IDEM consider deleting test condition D.7.8(j) due to this low emission rate and the fact that the source (Stack 389) will be monitored on a daily basis for visible emissions (See D.7.9(b)).

Response to Comment 2:

IDEM agrees with the comment and the permit is changed as follows:

D.7.8 Testing Requirements [326 IAC 2-1.1-11]

***

~~(j) In order to demonstrate compliance with Condition D.7.3(h), (i), and (j), not later than 180 days after the startup of the Starch Densifier Mill Surge Hooper, identified as 54V470, the Permittee shall perform PM, PM10, and PM2.5 testing utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.~~ ~~PM_{10} and $PM_{2.5}$ includes both filterable and condensable PM.~~

(~~k~~**j**) In order to demonstrate compliance with Conditions D.7.3(k), (l), and (m), and Condition D.7.3(n), (o), and (p), not later than 180 days after the startup of the three (3) Product Storage Bins, identified as 54V440, 54V441, 54V4CC or the three (3) Product Bins #1, #2, #3, identified as 07F50, 07F49, and 07F48 the Permittee shall perform PM, PM10, and PM2.5 testing on one of the six (6) bin vent filters controlling these units utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration and the unit tested shall be the unit in which the longest amount of time has elapsed since its previous test. PM_{10} and $PM_{2.5}$ includes both filterable and condensable PM.

(~~l~~**k**) 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 obligations with regard to the performance testing required by this condition.

Comment 3:

Condition 7.15(b) on page 122 requires a quarterly report on propylated starch production for Roll Dryers #304 and #305. Tate & Lyle has no objections to the inclusion of a propylated starch recordkeeping requirement for the new roll dryers under Section D.7.14(f) similar to the recordkeeping requirement for Flash Dryer #4. However, it should be noted that the propylated starch limit for the two dryers in Condition D.7.3(a)(2) is 56 mmlbs/yr. There is no potential for the two dryers to exceed this limit because the maximum production rate for each dryer is only 1400 lbs/hr (dry starch basis) which equates to a maximum rate of about 10-12 mmlbs/yr per dryer. This is much lower than the production limit referenced Condition D.7.3(a)(2). Tate & Lyle requests the quarterly reporting requirement for the two roll dryers be deleted from D.7.15(b). There is no need to modify the propylated starch production report on page 156 of the draft permit since it currently only references propylated starch production from Flash Dryer #4.

Response to Comment 3:

After confirming the maximum capacity of the two dryers, IDEM agrees to remove the reporting requirement for Roll Dryers #304 and #305. The permit is changed as follows:

D.7.15 Reporting Requirements

(a) A quarterly report of the combined propylene oxide input to document the compliance status with Conditions D.7.1(e)(2), D.7.3(a)(2), D.7.3(g)(2), and D.7.5(b) shall be submitted not later than thirty (30) days after the end of the quarter being reported.

(b) A quarterly report of propylated starch production on ~~Roll Dryers #304 and #305 (19D304 and 19D305) and~~ #4 Starch Flash Dryer (54D450), to document the compliance status with condition~~s D.7.3(a)(2) and~~ D.7.3(g)(2) shall be submitted not later than thirty (30) days after the end of the quarter being reported.

(c) 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).

Comment 4:

Tate and Lyle requested the following changes:

Page	Description of Correction Needed	Recommended Change
68	The phrase "within (90) days from the issuance date of Significant Permit Modification 157-30882-00003" in Section D.2.5(b) is shown as being deleted on page 28 of the TSD because the requirement was obsolete.	Delete the phrase "within (90) days from the issuance date of Significant Permit Modification 157-30882-00003" in Section D.2.5(b)
116	The phrase "within (90) days from the issuance date of Significant Permit Modification 157-27029-00003" in Section D.7.8(b) is obsolete. Spray Dryer #2 (46D200) was initially tested for compliance with permit limits on October 9, 2012 which makes this phrase obsolete.	Delete the phrase "within (90) days from the issuance date of Significant Permit Modification 157-27029-00003" in Section D.7.8(b).

Response to Comment 4:
IDEM disagree with the requested changes to Conditions D.2.5(b) and D.7.8(b). These conditions were not affected by the modification. They will be addressed in the Part 70 operating permit renewal.

Additional Changes

IDEM, OAQ has decided to make additional revisions to the permit as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

The permit is changed as follows to correct a typographical error:

E.5.2 Industrial, Commercial and Institutional Boilers and Process Heaters NESHAP [40 CFR Part 63, Subpart DDDDD] [326 IAC 20-95]

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

IDEM Contact

(a) Questions regarding this proposed Significant Source Modification and Significant Permit Modification can be directed to Ghassan Shalabi 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 317-234-5378 or toll free at 1-800-451-6027 extension 4-5378.

(b) A copy of the permit 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.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Significant Source Modification and Significant Permit Modification

Source Description and Location

Source Name:	Tate & Lyle Ingredients Americas LLC
Source Location:	2245 North Sagamore Parkway, Lafayette, IN 47904
County:	Tippecanoe
SIC Code:	2046
Operation Permit No.:	T157-27029-00003
Operation Permit Issuance Date:	July 3, 2012
Significant Source Modification No.:	157-34094-00003
Significant Permit Modification No.:	157-34105-00003
Permit Reviewer:	Ghassan Shalabi

Existing Approvals

The source was issued Part 70 Operating Permit No. T157-27029-00003 on July 3, 2012. The source has since received the following approvals:

(a) Administrative Amendment No. 157-32390-00003, issued on February 14, 2013

County Attainment Status

The source is located in Tippecanoe County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard.[1]
$PM_{2.5}$	Unclassifiable or attainment effective April 5, 2005, 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}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.
[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.	

(a) Ozone Standards
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. Tippecanoe County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Tippecanoe 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.

(e) Other Criteria Pollutants
Tippecanoe 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

The source includes a fiber flash dryer furnace, and package boilers with a total heat input rating of greater than 250 million British thermal units per hour (MMBtu/hr) which support the wet corn milling plant.

(1) Since this source is classified as a wet corn milling plant, it is not considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2 or 326 IAC 2-7. Therefore, fugitive emissions from the wet corn milling plant are not counted toward the determination of PSD and Part 70 Permit applicability.

(2) The fugitive emissions from fiber flash dryer furnace 21B501 are not counted toward PSD applicability because the applicable NSPS, Subpart Dc was in effect after August 7, 1980.

(3) The package boilers with a total heat input rating of greater than 250 MMBtu/hr are considered one of the 28 listed source categories, based on the EPA guidance for "nesting activities". Therefore, any fugitive emissions from these boilers are counted toward PSD applicability.

Source Status

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	350.74
PM_{10}	345.66
$PM_{2.5}$	134.60
SO_2	1,395.38
NO_X	958.77
VOC	241.01
CO	300.31
GHGs as CO_2e	394,611
Single HAP (HCl)	52.86
Total HAPs	132.29

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 250 tons per year or more, emissions of GHGs are equal to or greater than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) These emissions are based upon Administrative Amendment No. 157-32390-0003, issued on February 14, 2013.

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 Tate & Lyle Ingredients Americas LLC on January 21, 2014, relating to the implementation of several projects including a wet milling yield improvement project, the construction of several new starch drying systems, and the permanent conversion of the existing coal (CoGen) boiler to natural gas firing.

The following is a list of the proposed and modified emission units and pollution control devices:

Wet Milling Operations

(a) Two (2) Grit Starch Separator Screens, identified as 15J39 and 15J40, approved in 2014 for construction, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(b) One (1) Gluten Vacuum Filter, identified as 21F5, approved in 2014 for construction, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(c) One (1) Gluten Vacuum Filter Pump, identified as 21C105, approved in 2014 for construction, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(d) Insignificant Activities:

  (1) Steepwater Evaporator Vacuum Pump, identified as (14P511), approved in 2014 for construction, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17. (14P511) will serve as a backup to the existing steepwater evaporator vacuum pump (14P510).

  (2) Starch storage tank, identified as Dent 1 Starch Storage Tank (15V263), approved in 2014 for construction, and exhausting to stack 452.

Syrup Refining Operations

(a) One (1) Jet Conversion Flash Chamber, identified as 18V513, approved 2014 for construction, for the production of Maltodextrin, with SO_2 and VOC emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17 (see Section D.2 for the control device monitoring requirements).

(b) One (1) Powdered Carbon Transfer System, identified as 18C101, approved in 2014 for construction, with emissions controlled by Powdered Carbon Transfer Receiver/Baghouse, identified as 18F101 and exhausting through stack 462. The Powdered Carbon Transfer Receiver/Baghouse is installed to pneumatically transfer carbon from the Powdered Carbon Storage Silo, identified as 9V30, to the precoat vacuum filters.

Insignificant Activities:

(a) Precoat Vacuum Filter (S/V 163A), approved in 2014 for construction, identified as 15F57.

(b) Precoat Filter Vacuum Pump (S/V 161A), approved 2014 for construction, identified as 18C57.

(c) One (1) Enzyme Liquefaction Reactor, identified as 18V230, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack460.

(d) One (1) Enzyme Liquefaction Reactor, identified as 18V231, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack461.

Starch Modification Operations

(a) One (1) Propylated Starch Reactor, identified as 45V298, approved in 2014 for construction, with emissions controlled by scrubber 45F212, exhausting to stack 50, and equipped with emergency pressure relief vent, identified as 45V298-PRV, that will exhaust to stack 417.

(b) One (1) Propylated Starch Reactor, identified as 45V299, approved in 2014 for construction, with emissions controlled by scrubber 45F212, and exhausting to stack 50, and equipped with emergency pressure relief vent, identified as 45V299-PRV, that will exhaust to stack 418.

(c) One (1) Oxidized Starch Reactor, identified as 18V274, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack 455.

(d) One (1) Flash 4 Slurry Hold Tank, identified as 54V401, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack 419.

(e) One (1) Flash 4 Larox Filter Feed Tank, identified as 54V403, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack 420.

(f) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F421/54V421, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack 421.

(g) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F422/54V422, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack 422.

(h) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F4MM/54V4MM, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack 423.

Insignificant Activities:

(a) One (1) 10,000 gallon sodium bisulfite Storage Tank, Identified as 18V108, approved in 2014 for construction, with emissions uncontrolled and exhausting to stack 456.

(b) One (1) 10,000 gallon sodium chlorite Storage Tank, Identified as 18V109, approved in 2014 for construction, with emissions uncontrolled and exhausting to stack 457.

(c) Roll Dryer Rotary Vacuum Filter (S/V 163B), identified as 18F53.

(d) Roll Dryer Rotary Filter Vacuum Pump (S/V 161B), identified as 18C233.

(e) One (1) vent fan, identified as 45C298, installed on Propylated Starch Reactor (45V298), approved in 2014 for construction, uncontrolled, and utilized after the acid-kill step, and exhausting to stack 417.

(f) One (1) vent fan, identified as 45C299, installed on Propylated Starch Reactor (45V299), approved in 2014 for construction, uncontrolled, and utilized after the acid-kill step, and exhausting to stack 418.

Starch Drying and Handling Operations

(a) One (1) Starch Roll Dryer #304, identified as 19D304, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stacks 408A and 408B.

(b) One (1) Starch Roll Dryer #305, identified as 19D305, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stacks 409A and 409B.

(c) #2 Starch Agglomerator, identified as 52D210, approved in 2014 for construction, controlled by four product collection cyclones (52F220 - 52F223) and baghouse 52F230, and exhausting to stack 361. #2 Starch Agglomerator System consists of the following:

(1) One (1) dryer equipped with a direct-fired natural gas low NOx burner, with heat input capacity of 20 MMBtu/hr.

(2) One (1) mechanical fluid bed, identified as 52Y211, aspirated to the inlet of the agglomerator.

(3) One (1) fines recycle system, identified as 52C221, transferring product to the inlet of the agglomerator.

(4) One (1) #5 tote packing system with head hopper, identified as 52V245 and tote packer, identified as 52Z245, aspirated to the agglomerator #2 packer dust collector, identified as 52F225, exhausting via vent 362 to stack 361.

(5) One (1) #7 bag packing system with head hopper, identified as 52V247 and bag packer, identified as 52Z247 aspirated to the agglomerator #2 packer dust collector, identified as 52F225, exhausting via vent 362 to stack 361. General aspiration of the packer #7 bag conveying equipment is by the packer #6 House Dust Collector, identified as 56F602.

(6) One (1) reprocess bag dump, identified as 52V225, aspirated to the agglomerator #2 packer dust collector, identified as 52F225, and exhausting via vent 362 to stack 361. Reprocessed product is also transferred via a blower, identified as 52C224 to the packer dust collector, identified as 52F225, from the bag dump.

(7) Two (2) product storage bins, identified as 52V250 and 52V251, equipped with bin vent filters, identified as 52F250 and 52F251, and exhausting to stacks 401 and 402. Only one of the two product storage bins can receive product from the agglomerator at any time.

(d) #4 Starch Flash Dryer, identified as 54D450, approved in 2014 for construction, controlled by six product collection cyclones, identified as 54F451-54F456, followed by a wet scrubber, identified as 54F460, and exhausting to stack 388, limited to 250 million lb/year of propylated starch. #4 Starch Flash Dryer System consists of the following:

(1) One (1) dryer equipped with a direct-fired natural gas low-NOx burner, with heat input capacity of 32MMBtu/hr.

(2) One (1) Starch Densifier Mill Surge Hopper, identified as 54V470, controlled by bin vent filter, identified as 54F471, and exhausting to stack 389.

(3) Three (3) Product Storage Bins, identified as 54V440, 54V441, and 54V4CC, equipped with bin vent filters, identified as 54F440, 54F441, and 54F4CC, and exhausting to stacks 385, 386, and 387.

(4) One (1) Product Bin #1, identified as 07V50, approved in 2014 for construction, formerly associated with Special Belt Dryer 16D5, with emissions controlled by bin vent 07F73, and exhausting to stack 109.

(5) One (1) Product Bin #2, identified as 07V49, approved in 2014 for construction, formerly associated with Special Belt Dryer 16D5, with emissions controlled by bin vent 07F72, and exhausting to stack 108.

(6) One (1) Product Bin #3, identified as 07V48, approved in 2014 for construction, formerly associated with Special Belt Dryer 16D5, with emissions controlled by bin vent 07F71, and exhausting to stack 107.

Starch Packaging and Loadout

(a) One (1) Bag Packer #6 System, approved in 2014 for construction, consisting of the following:

(1) One (1) Packer #6 Product Receiver, identified as 56F601, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(2) One (1) Packer #6 Head Hopper, identified as 56V600, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(3) One (1) Bag Packer #6, identified as 56Z600, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(4) One (1) Reprocess Bag Dump Transfer Line, identified as 56C630, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(5) One (1) Packer #6 House Dust Collector, identified as 56F602, with emissions from Ultrasonic Sealers and Bag Conveying Systems associated with Packer #6 and Bag Packer Conveying Equipment associated with #2 Starch Agglomerator, controlled by baghouse 56F602, and exhausting via vent 381 to stack 361.

(6) One (1) Reprocess Bag Dump, identified as 56V630 with emissions controlled by baghouse 56F602, and exhausting via vent 381 to stack 361.

Utility Area

(1) One (1) NG-fired boiler, identified as 31B1, constructed in 1984 and modified in 2004 and 2014, with a heat input capacity of 231 MMBtu/hr, equipped with four (4) low-NO_x burners, using natural gas and exhausting to stack 202.

Enforcement Issues

There are no pending enforcement actions.

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (^{0}F)
17	Gluten Vacuum Filter Gluten Filter Vacuum Pump Grit Starch Separator Screens Atmospheric Jet Conversion Flash Chamber for Maltodextrin	200	8	160,000	100
50	Propylated Starch Reactor (45V298) Propylated Starch Reactor (45V299)	100	1.17	1200	120
107	Product Bin #3	44	1.38	5500	70
108	Product Bin #2	44	1.38	5500	70
109	Product Bin #1	44	1.38	5500	70
124	Powdered Carbon Unloading	86	6	700	90
129	Filteraid Conveying System to Precoat	60	6	700	80
145	Gluten Dryer Air Conveying Line	70	1.92	10,000	80

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (^{0}F)
202	CoGen Boiler	200	5.5	88,000	326
361	Agglomerator #2 Agglomerator #2 External Fluid Bed Agglomerator #2 Fines Recycle	150	7.25	113,735	208
362	Agglomerator Packer #7 and Head Hopper Process Bag Dump Process Bag Dump Transfer Line	NA	NA	3000	80
380	Packer #6 Product Receiver; Packer Head Hopper; Bag Packer; and Reprocess Bag Dump Transfer Line	NA	NA	3000	80
381	Packer #6 Ultrasonic Sealers and Bag Conveying Systems, Reprocess Bag Dump, and #2 Starch Agglomerator Bag Packer Conveying Equipment	NA	NA	16,000	80
385	Product Bin #440	70	1.38	5500	70
386	Product Bin #441	70	1.38	5500	70
387	Product Bin #4CC	70	1.38	5500	70
388	Starch flash Dryer #4	200	6	111,000	105
389	Starch Densifier Mill Surge Hopper	TBD	TBD	400	140
401	Product Bin #250	70	1.08	2000	110
402	Product Bin #251 Agglomerator Tote Bagger #5 and Head Hooper	70	1.08	2000	110
408A/408B	Starch Roll Dryer #304	45	2.5	11400	110
409A/409B	Starch Roll Dryer #305	45	2.5	11400	110
419	Flash 4 Slurry Hold Tank	TBD	TBD	TBD	TBD
420	Flash 4 Larox Filter Feed Tank	TBD	TBD	TBD	TBD
421	Flash 4 Larox Filter and Air Release Tank	TBD	TBD	TBD	TBD
422	Flash 4 Larox Filter and Air Release Tank	TBD	TBD	TBD	TBD
423	Flash 4 Larox Filter and Air Release Tank	TBD	TBD	TBD	TBD
445	41 Bldg House Vacuum System	2	0.33	500	150
455	Oxidized Starch Reactor	TBD	TBD	TBD	TBD
462	Powdered Carbon Transfer Receiver	40	6	120	80

Emission Calculations

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

Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency.”

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Appendix A of this TSD reflects the unrestricted potential emissions of the modification.

PTE Change of the Modified Process (Boiler 31B1)			
Pollutant	**PTE Before Modification** (ton/yr)	**PTE After Modification** (ton/yr)	**Increase from Modification** (ton/yr)
PM	708.246	1.9	0
PM_{10}	44.676	7.5	0
$PM_{2.5}$	50.589	7.5	0
SO_2	1214.136	0.6	0
VOC	4.818	5.5	0.68
CO	44.676	70.8	26.12
NO_X	708.246	101.2	0
HAPs	59.93	1.87	0

Total PTE Increase due to the Modification			
Pollutant	**PTE New Emission Units** (ton/yr)	**Net Increase to PTE of Modified Emission Units** (ton/yr)	**Total PTE for New and Modified Units** (ton/yr)
PM	33.24	0	33.24
PM_{10}	46.47	0	46.47
$PM_{2.5}$	33.82	0	33.82
SO_2	10.23	0	10.23
VOC	29.43	0.68	30.11
CO	18.22	26.12	44.34
NO_X	9.11	0	9.11
HAPs	0.07	0	0.07

This source modification is subject to 326 IAC 2-7-10.5(g)(4) because it is a modification with a potential to emit greater than or equal to twenty-five (25) tons per year of PM, PM10, PM2.5, and VOC. Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d)(1) because it requires a case-by-case determination of an emission limitation or other standard.

Permit Level Determination – PSD

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 source and permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential to Emit (ton/yr)								
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**NO_X**	**VOC**	**CO**	**H2SO4**	**GHGs**
New Units	33.24	46.47	33.82	10.67	9.11	29.86	18.22	0.72	26,648

Existing Units (ATPA)	2.92	3.45	2.61	3.09	4.27	9.97	66.88	0.02	4,330
Total for Modification	36.16	49.92	36.43	13.76	13.38	39.83	85.10	0.74	30,978
Contemporaneous Increase	0.19	0.19	0.19	-	-	-	-	-	-
Contemporaneous Decrease	-33.63	-75.67	-60.23	-	-	-	-	-	-
Total for Modification after Netting	2.73	0	0	13.76	13.38	39.83	85.10	0.74	30,978
Significant Level	25	15	10	40	40	40	100	7	75,000 CO_2e

*$PM_{2.5}$ listed is direct $PM_{2.5}$.

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

The Permittee has provided information as part of the application for this approval that based on Actual to Projected Actual test in 326 IAC 2-2-2 this modification at a major stationary source will not be major for Prevention of Significant Deterioration under 326 IAC 2-2-1. IDEM, OAQ has not reviewed this information and will not be making any determination in this regard as part of this approval. The applicant will be required to keep records and report in accordance with Source obligation in 326 IAC 2-2-8.

Federal Rule Applicability Determination

The following federal rules are applicable to the source due to this modification:

NSPS:

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

NESHAP:

(b) The CoGen Boiler, identified as 31B1, the existing NG-Fired Boilers (11B1, 11B2, and 11B3), and the Fiber Flash Dryer Furnace (21B501) are subject to the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heater 40 CFR 63, Subpart DDDDD, which is incorporated by reference as 326 IAC 20-95.

Nonapplicable portions of the NESHAP will not be included in the permit. The CoGen Boiler (31B1), the existing NG-Fired Boilers (11B1, 11B2, and 11B3), and the Fiber Flash Dryer Furnace (21B501) are subject to the following portions of Subpart DDDDD:

(1) 40 CFR 63.7485
(2) 40 CFR 63.7500(a)(1)
(3) 40 CFR 63.7505(a)
(4) 40 CFR 63.7510(a)(2)(ii) & (e)
(5) 40 CFR 63.7515(d)
(6) 40 CFR 63.7521(f)(g)
(7) 40 CFR 63.7530(g)
(8) 40 CFR 63.7540(a)(10)
(9) 40 CFR 63.7540(a)(19)(vi)(c)
(10) 40 CFR 63.7545(b)(c)(e)(h)
(11) 40 CFR 63.7555(g)
(12) 40 CFR 63.7575

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 DDDDD.

(c) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) applicable to this proposed modification.

(d) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

This modification does not involve any new or modified units that have a potential to emit before controls equal to or greater that Part 70 source threshold. Therefore, 40 CFR 64 is not applicable to this modification.

State Rule Applicability Determination

326 IAC 2-2 (PSD)
PSD is discussed under the Permit Level Determination – PSD.

326 IAC 2-6 (Emission Reporting)
Since this source is required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, this source is subject to 326 IAC 2-6 (Emission Reporting). The potential to emit of PM_{10} is greater than 250 tons per year. Therefore, pursuant to 326 IAC 2-6-3(a)(1), annual reporting is required. An emission statement shall be submitted by July 1, 2015, and every year thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1).

326 IAC 6-4 (Fugitive Dust)
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 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitation For Sources of Indirect Heating), the particulate matter emissions from boiler 31B1, constructed in 1985, modified in 2004 and approved in 2014 for modification, shall not exceed 0.20 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = 1.09 / Q^{0.26}$$

Where:
Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input.
Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input. The maximum operating capacity is specified in the

facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used (Q = 666 MMBtu/hr).

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

The following controls and units have PSD minor limits that are more stringent than the 326 IAC 6-3-2 allowable particulate emission rates:

Receiver/Baghouse 18F101, Agglomerator #2, identified as 52D210, Mechanical Fluid Bed, identified as 52Y211, Fines Recycle identified as 52C221, #4 Starch Flash Dryer, identified as 54D450, Starch Densifier Mill Surge Hopper, identified as 54V470, #5 tote packing system with head hopper, identified as 52V245, tote packer, identified as 52Z245, #7 bag packing system with head hopper, identified as 52V247, bag packer, identified as 52Z247, reprocess bag dump, identified as 52V225, blower, identified as 52C224, three (3) Product Storage Bins, identified as 54V440, 54V441, and 54V4CC, Product Bins #1, #2, and #3, identified as 07V50, 07V49, and 07V48, product storage bins, identified 52V250 and 52V251, baghouse 56F601, and baghouse 56F602.

Therefore, compliance with these limits shall satisfy compliance with 326 IAC 6-3-2.

326 IAC 8-1-6 (Volatile Organic Compounds - BACT)
All of the emission units that were approved for construction or modification in this permit have the potential emissions of VOC less than twenty-five (25) tons per year. Therefore, none of these emission units are subject to the requirements of 326 IAC 8-1-6.

326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills)
This source does not produce ethanol. Therefore, this source is not subject to the requirements of 326 IAC 8-5-6.

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:

Summary of Testing Requirements					
Emission Unit	**Control Device**	**Timeframe for Testing**	**Pollutant**	**Frequency of Testing**	**Limit or Requirement**
Gluten Vacuum Filter, Gluten Filter Vacuum Pump, and Grit Separator Screens	Scrubber 15 F401	180 days after start up	SO2 and VOC	every 5 years	PSD avoidance limits and BACT
Jet Conversion Flash Chamber	Scrubber 15F401	180 days after start up	SO2 and VOC	every 5 years	PSD avoidance limit
Propylated Starch Reactors (45V298 and 45V299)	Scrubber 45F212	180 days after start up	VOC	every 5 years	PSD avoidance limits and BACT
Agglomerator #2, Mechanical Fluid Bed, and Fine Recycle System	Baghouse 52F230	180 days after start up	PM, PM10, and PM2.5	every 5 years	PSD avoidance limit
#5 tote packing system with head hopper, tote packer, #7 bag packing system with head hopper, bag packer, reprocess bag dump, and blower or Packer #6 Product Receiver, Packer #6 Head Hopper, Packer #6, Reprocess Bag Dump Transfer Line	Dust Collector 52F225 or Baghouse 54F601	180 days after start up	PM, PM10, and PM2.5	every 5 years for the unit in which the longest time has elapsed since its previous test.	PSD avoidance limit
product storage bin 52V250 or product storage bin 52V251	bin vent filter 52F250, or 52F251,	180 days after start up	PM, PM10, and PM2.5	every 5 years for the unit in which the longest time has elapsed since its previous test.	PSD avoidance limit

Summary of Testing Requirements					
Emission Unit	**Control Device**	**Timeframe for Testing**	**Pollutant**	**Frequency of Testing**	**Limit or Requirement**
product storage bin 54V440, or 54V441, or 54V4CC, or 07V50, or 07V49, or 07V48	bin vent filter 54F440, or 54F441, or 54F4CC, or 07F73, or 07F72, or 07F71	180 days after start up	PM, PM10, and PM2.5	every 5 years for the unit in which the longest time has elapsed since its previous test.	PSD avoidance limit
Starch Mill Surge Hooper	bin vent filter 54F471	180 days after start up	PM, PM10, and PM2.5	every 5 years	PSD avoidance limit
#4 Starch Flash Dryer	Wet Scrubber 54F460	180 days after start up	PM, PM10, and PM2.5	every 5 years	PSD avoidance limit
Ultrasonic Sealers and Bag Conveying Systems associated with Packer #6 and Bag Packer Conveying Equipment associated with #2 Starch Agglomerator	Baghouse 56F602	180 days after start up	PM, PM10, and PM2.5	every 5 years	PSD avoidance limit

The compliance monitoring requirements applicable to this modification are as follows:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Baghouse 18F101	Visible Emissions	Once per day	Normal-Abnormal	Response Steps
Scrubber 54F460	Scrubber Recirculation - Flow	Continuous	>1000 gpm	Response Steps
Baghouse 56F602	Water Pressure Drop	Continuous	0.5 to 7.5 inches	Response Steps
Baghouse 52F230	Visible Emissions	Once per day	Normal-Abnormal	Response Steps
	Water Pressure Drop	Once per day	0.5 to 7.5 inches	
Bin Vents 54F440, 54F441, and 54F4CC	Visible Emissions	Once per day	Normal-Abnormal	Response Steps
Bin Vents 52F250 and 52F251	Visible Emissions	Once per day	Normal-Abnormal	Response Steps

These monitoring conditions are necessary to show compliance with PSD avoidance limits to the 2014 modification.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. 157-27029-00003. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

(a) Changes due to the SSM and SPM application received on January 21, 2014:

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

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

(a) Corn Receiving and Handling Operations, consisting of:

***

(b) Wet Milling Operations, consisting of:

***

(9) Seven (7) Grit Starch Separator **(Third Grind)** Screens, identified as 15J15 through 15J19, 15J21, and 15J22, constructed in 1990, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(10) Two (2) Grit Starch Separator Screens, identified as 15J39 and 15J40, approved in 2014 for construction, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(1~~0~~**1**) ***

(1~~1~~**2**) ***

(1~~2~~**3**) ***

(1~~3~~**4**) ***
(1~~4~~**5**) ***

(1~~5~~**6**) ***

~~(16) One (1) Steeped Corn Surge Hopper, identified as 15V21, constructed in 1966, exhausting to the intake of Steeped Corn Separator 15J5A, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.~~

***

~~(27) Thirty-six (36) Fiber Wash Screens, identified as 1st Stage through 5th Stage Fiber Wash Screens, constructed in 1966, exhausting to the intake of Fiber Wash Receiver Tanks 15V110 through 15V114, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.~~

~~(28) One (1) Dent Starch Slurry Storage Tank, identified as 15V43, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.~~

(~~29~~**27**) ***

(~~30~~**28**) ***

(~~31~~**029**) ***

(3~~2~~**0**) ***

(3~~3~~**1**) ***

(3~~4~~**2**) ***

(3~~5~~**3**) ***

(3~~6~~**4**) ***

(3~~7~~**5**) ***

(3~~8~~**6**) ***

(3~~9~~**7**) ***

(~~40~~**38**) ***

(39) One (1) Gluten Vacuum Filter, identified as 21F5, approved in 2014 for construction, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(40) One (1) Gluten Vacuum Filter Pump, identified as 21C105, approved in 2014 for construction, with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

***

(c) ***

(d) Syrup Refining Operations, consisting of:

***

(4) One (1) Jet Conversion Flash Chamber, identified as 18V513, approved in 2014 for construction, for the production of Maltodextrin, with SO_2 and VOC emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

(~~4~~**5**) ***

(~~5~~**6**) ***

(~~6~~**7**) One (1) Filteraid Conveying System to Precoat Makeup Tank, identified as ~~09C27 and~~ 18C18, constructed in 1966, with emissions controlled by integral product receiver/baghouse 18F118~~ and air washer 18F218~~, and exhausting to stack 129.

(~~7~~**8**) One (1) Powdered Carbon Storage Silo, identified as 9V30, loaded pneumatically via Powdered Carbon Unloading System, identified as 9C30, constructed in 1966, with emissions controlled by **bin vent filter 09F30** ~~cyclone 09F36, baghouse 09F30, and air washer 09F1~~, and exhausting to stack 124.

(9) One (1) Powdered Carbon Transfer Receiver, identified as 18F101, approved in 2014 for construction, to pneumatically transfer carbon from the Powdered Carbon Storage Silo, identified as 9V30, to the precoat vacuum filters. The pneumatic air will exhaust through blower 18C101 to stack 462.

(e) Starch Modification Operations, consisting of:

***

(17) One (1) Propylated Starch Reactor, identified as 45V298, approved in 2014 for construction, with emissions controlled by scrubber 45F212, exhausting to stack 50, and equipped with emergency pressure relief vent, identified as 45V298-PRV, that will exhaust to stack 417.

(18) One (1) Propylated Starch Reactor, identified as 45V299, approved in 2014 for construction, with emissions controlled by scrubber 45F212, exhausting to stack 50, and equipped with emergency pressure relief vent, identified as 45V299-PRV, that will exhaust to stack 417.

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(~~19~~**21**) ~~One (1) Oxidized Starch Reactor, identified as 18V180, constructed in 1994 and approved in 2009 for modification and approved in 2010 for modification, with emissions uncontrolled, and exhausting to stack 42.~~
One (1) Oxidized Starch Reactor, identified as 18V274, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack 455.

(2~~0~~**2**) ***

(2~~1~~**3**) ***

~~(22) One (1) Oxidized Starch Reactor, identified as 18V179, constructed in 1994 and approved in 2010 for modification, with emissions uncontrolled, and exhausting to stack 42.~~

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(40) One (1) Flash 4 Slurry Hold Tank, identified as 54V401, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, and exhausting to stack 419.

(41) One (1) Flash 4 Larox Filter Feed Tank, identified as 54V403, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, all other emissions are uncontrolled, and exhausting to stack 420.

(42) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F421/54V421, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, all other emissions are uncontrolled, and exhausting to stack 421.

(43) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F422/54V422, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, all other emissions are uncontrolled, and exhausting to stack 422.

(44) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F4MM/54V4MM, approved in 2014 for construction with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, all other emissions are uncontrolled, and exhausting to stack 423.

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(f) ***

(g) Starch Drying and Handling Operations, consisting of:

***

(37) One (1) 41 Building House Vacuum System, identified as 41F133, constructed in 2012, with emissions controlled by baghouse 41F133, and exhausting to stack 445.

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(3~~8~~**9**) One (1) Product Transfer to Bins #14 and #15, identified as ~~41C30~~ 41C145, constructed in 1987 and approved for modification in 2013, with emissions controlled by intermediate product collector/baghouse 30F133 using blower 30C133, exhausting to the product transfer system and integral product collector/baghouses 41F14 and 41F15, respectively, and exhausting via vent 85 to stack 355.

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(4~~1~~**2**) ***

~~(42) One (1) Special Starch Belt Dryer D5, identified as 16D5, constructed in 1966, with emissions controlled by the rotoclone scrubbers 16F27 and 17F79, and exhausting to stack 177.~~

(43) One (1) Belts Product Conveying Mill Product to Bins ~~#3,~~ #4, and #5, identified as 7F25, constructed in 1966, with emissions controlled by integral product collector/baghouse 7F25, and exhausting to stack 103.

~~(44) One (1) Belts Product Conveying Mill Product to Bins #1, #2, and #3, identified as 7F26, constructed in 1966, with emissions controlled by integral product collector/baghouse 7F26, and exhausting to stack 104.~~

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(60) **One (1) Starch Roll Dryer #304, identified as 19D304, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stacks 408A and 408B.**

(61) **One (1) Starch Roll Dryer #305, identified as 19D305, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stacks 409A and 409B.**

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(67) **#2 Starch Agglomerator, identified as 52D210, approved in 2014 for construction, controlled by four product collection cyclones (52F220 - 52F223) and baghouse 52F230, and exhausting to stack 361. #2 Starch Agglomerator system consists of the following:**

(A) **One (1) dryer equipped with a direct-fired natural gas low NOx burner, with heat input capacity of 20 MMBtu/hr.**

(B) **One (1) mechanical fluid bed, identified as 52Y211, aspirated to the inlet of the agglomerator.**

(C) **One (1) fines recycle system, identified as 52C221, transferring product to the inlet of the agglomerator.**

(D) **One (1) #5 tote packing system with head hopper, identified as 52V245 and tote packer, identified as 52Z245 aspirated to the agglomerator #2 packer dust collector, identified as 52F225, exhausting via vent 362 to stack 361.**

(E) **One (1) #7 bag packing system with head hopper, identified as 52V247 and bag packer, identified as 52Z247 aspirated to the agglomerator #2 packer dust collector, identified as 52F225, exhausting via vent 362 to stack 361. General aspiration of the packer #7 bag conveying equipment is by the packer #6 House Dust Collector, identified as 56F602.**

(F) **One (1) reprocess bag dump, identified as 52V225, aspirated to the agglomerator #2 packer dust collector, identified as 52F225, and exhausting via vent 362 to stack 361. Reprocessed product is also transferred via a blower, identified as 52C224 to the packer dust collector, identified as 52F225, from the bag dump.**

(G) **Two (2) product storage bins, identified as 52V250 and 52V251, equipped with bin vent filters, identified as 52F250 and 52F251, and exhausting to stacks 401 and 402. Only one of the two product storage bins can receive product from the agglomerator at any time.**

(68) **Two (2) product storage bins, identified as 52V250 and 52V251, controlled by bin vent filters, identified as 52F250 and 52F251, and exhausting to**

stacks 401 and 402. Only one of the two product storage bins can receive product from the agglomerator at any time.

(69) #4 Starch Flash Dryer, identified as 54D450, approved in 2014 for construction, controlled by six product collection cyclones, identified as 54F451-54F456, followed by a wet scrubber, identified as 54F460, and exhausting to stack 388, limited to 250 million lb/year of propylated starch. #4 Starch Flash Dryer System consists of the following:

(A) One (1) dryer equipped with a direct-fired natural gas low-NOx burner, with heat input capacity of 32MMBtu/hr.

(B) One (1) Starch Densifier Mill Surge Hopper, identified as 54V470, controlled by bin vent filter, identified as 54F471, and exhausting to stack 389.

(C) Three (3) Product Storage Bins, identified as 54V440, 54V441, and 54V4CC, equipped with bin vent filters, identified as 54F440, 54F441, and 54F4CC, and exhausting to stacks 385, 386, and 387.

(D) One (1) Product Bin #1, identified as 07V50, approved in 2014 for construction, formerly associated with Special Belt Dryer 16D5, with emissions controlled by bin vent 07F73, and exhausting to stack 109.

(E) One (1) Product Bin #2, identified as 07V49, approved in 2014 for construction, formerly associated with Special Belt Dryer 16D5, with emissions controlled by bin vent 07F72, and exhausting to stack 108.

(F) One (1) Product Bin #3, identified as 07V48, approved in 2014 for construction, formerly associated with Special Belt Dryer 16D5, with emissions controlled by bin vent 07F71, and exhausting to stack 107.

(h) Starch Packaging and Loadout Operations, consisting of:

***

(25) One (1) Bag Packer #6 System, approved in 2014 for construction, consisting of the following:

(A) One (1) Packer #6 Product Receiver, identified as 56F601, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(B) One (1) Packer #6 Head Hopper, identified as 56V600, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(C) One (1) Bag Packer #6, identified as 56Z600, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(D) One (1) Reprocess Bag Dump Transfer Line, identified as 56C630, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.

(E) One (1) Packer #6 House Dust Collector, identified as 56F602, with emissions from Ultrasonic Sealers and Bag Conveying Systems associated with Packer #6 and Bag Packer Conveying Equipment associated with #2 Starch Agglomerator, controlled by baghouse 56F602, and exhausting via vent 381 to stack 361.

(F) One (1) Reprocess Bag Dump, identified as 56V630 with emissions controlled by baghouse 56F602, and exhausting via vent 381 to stack 361.

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~~(i) Boiler Support Facilities, consisting of:~~

~~(1) One (1) Coal Storage Silo, identified as 31V3, constructed in 1984, with emissions controlled by bin vent 31F21, and exhausting to stack 203. Under 40 CFR 60, Subpart Y, this is considered an affected facility. [40 CFR 60, Subpart Y]~~

~~(2) One (1) Coal Day Bin, identified as 31V4, constructed in 1984, with emissions controlled by bin vent 31F19, and exhausting to stack 204. Under 40 CFR 60, Subpart Y, this is considered an affected facility. [40 CFR 60, Subpart Y]~~

~~(3) One (1) Coal Day Bin, identified as 31V5, constructed in 1984, with emissions controlled by bin vent 31F20, and exhausting to stack 205. Under 40 CFR 60, Subpart Y, this is considered an affected facility. [40 CFR 60, Subpart Y]~~

~~(4) One (1) GMH Storage Silo, identified as 9V32, loaded pneumatically via Pneumatic Conveyor, identified as 17C19, constructed in 1966, with emissions controlled by bin vent 9F32, and exhausting to stack 119.~~

~~(5) One (1) Boiler Ash Pneumatic Transfer to Ash Silo, identified as 31F10, constructed in 1984, with emissions controlled by baghouse 31F22 with ash steam exhauster 31Z3 and air washer 31Z5, and exhausting to stack 200.~~

~~(6) One (1) Boiler Ash Silo and Truck Loading, identified as 31V1, constructed in 1984, with emissions controlled by bin vent 31F1, and exhausting to stack 199.~~

(~~j~~**i**) Utility Area, consisting of:

(1) Three (3) natural gas-fired boilers, identified as 11B1, 11B2 and 11B3, constructed in 1966, each with a heat input capacity of 125 MMBtu/hr, with emissions uncontrolled, and exhausting to stack 197.

(2) One (1) ~~coal-fired~~**NG-fired** boiler, identified as 31B1, constructed in 1984 and modified in 2004 **and 2014**, with a heat input capacity of 231 MMBtu/hr, equipped with **four (4)** low-NO_x burners, using natural gas ~~or coal and starch mixture as supplement fuels, with emissions controlled by baghouse 31F2~~, and exhausting to stack 202.

(~~k~~**j**) ***

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 also includes the following insignificant activities:

***

~~(w) Coal bunker and coal scale exhausts and associated dust collector vents. [326 IAC 6-3-2]~~

(~~x~~**w**) Asbestos abatement projects regulated by 326 IAC 14-10. [326 IAC 14-10]

(~~y~~**x**) ***

(~~z~~**y**) ***

(~~aa~~**z**) ***

(~~bb~~**aa**) ***

(~~cc~~**bb**) ***

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~~(ff) Vents from ash transport systems not operated at positive pressure. [326 IAC 6-3-2]~~

(~~gg~~**ee**) ***

(~~hh~~**ff**) ***

~~(ii) Facilities in coal preparation plants, including:~~

~~(1) One (1) Coal Truck Dump Hopper, identified as 31V2, constructed in 1984, with emissions uncontrolled.~~

~~(2) One (1) Coal Bucket Elevator, identified as 31U3, constructed in 2009, permitted in 2011, with emissions uncontrolled, and exhausting to Conveyor 31U5.~~

~~(3) One (1) Coal Bucket Elevator, identified as 31U4, constructed in 2008, permitted in 2011, with emissions uncontrolled, and exhausting to Conveyor 31U5.~~

~~(4) One (1) Coal Feed Conveyor, indentified as 31U5, constructed in 1984, with~~

~~emissions uncontrolled, and exhausting to Silo 31V3 and Bins 31V4 and 31V5.~~

~~(5) One (1) Coal Pulverizer, identified as 31G3, with starch loaded pneumatically via Pneumatic Conveyor, identified as 09C35, constructed in 1984, with emissions exhausting to Boiler 31B1.~~

~~(6) One (1) Coal Pulverizer, identified as 31G4, with starch loaded pneumatically via Pneumatic Conveyor, identified as 09C35, constructed in 1984, with emissions exhausting to Boiler 31B1.~~

~~Under 40 CFR 60, Subpart Y, these are considered existing affected sources.~~
~~[40 CFR 60, Subpart Y]~~

(~~jj~~**gg**) ***

(~~kk~~**hh**) ***

Buildings 7 and 25 --- Starch Bin Room and Belt Dryer Mill Room:
***
~~Belt Dryer Vacuum Filter Pump (S/V 179), identified as 07C4.~~

Building 11 --- Utilities and Chemical Unloading Area:
***

Building 14 --- Steep Tank Area and Chemical Unloading Area:
***
Light Steepwater Storage Tank (S/V 300), identified as 14V21.
Dent 1 Starch Storage Tank (S/V 452), identified as 15V263, approved in 2014 for construction.
~~Dent 1~~**Waxy 2** Starch Storage Tank (S/V 451), identified as 15V265.
***

Building 15 --- Wet Mill:
***

Building 16 --- Belt Dryers:
***
~~Belt Dryer Scrubber Pot (S/V 294), identified as 16F27.~~

Building 17 --- Starch Warehouse:
***
~~Belt Dryer Scrubber Pot (S/V 296), identified as 17F79.~~

Buildings 18, 18B, and 18C --- Refinery Area:
***
Jet Cooker Entry Chamber (S/V 320), identified as 18V67.
Enzyme Liquefaction Reactor (S/V 460), identified as 18V230
Enzyme Liquefaction Reactor (S/V 461), identified as 18V231
***
Maltodextrin Tank, identified as 18V169.
***
Maltodextrin Tank, identified as 18V184.

***
Precoat Vacuum Filter (S/V 163E), identified as 18F20.
Precoat Vacuum Filter (S/V 163A), approved in 2014 for construction, identified as 18F57.
Precoat Filter Vacuum Pump (S/V 161D), identified as 18C156.
Precoat Filter Vacuum Pump (S/V 161E), identified as 18C20.

Precoat Filter Vacuum Pump (S/V 161A), approved 2014 for construction, identified as 18C57.
***

Building 19 --- Roll Dryer System:
***

Building 21 --- Feed House:
***

Building 34 --- Waste Treatment Building:
***

Building 41 --- Roll Dryers:
~~41 Building House Vacuum System, identified as 41F133. [326 IAC 6-3-2]~~
***

Building 45 --- Propylene Oxide Reactors:
***
Propylene Oxide Reactor (45V296) Vent Fan (S/V 416), identified as 45C296.
Propylene Oxide Reactor (45V298) Pressure Relief Vent (S/V 417), identified as 45V298-PRV.
Propylene Oxide Reactor (45V298) Vent Fan, identified as 45C298, approved in 2014 for construction, uncontrolled and utilized after the acid-kill step, and exhausting to stack 417.
Propylene Oxide Reactor (45V299) Pressure Relief Vent (S/V 418), identified as 45V299-PRV.
Propylene Oxide Reactor (45V299) Vent Fan, identified as 45C299, approved in 2014 for construction, uncontrolled and utilized after the acid-kill step, and exhausting to stack 418.
***

Building 46 --- Spray Dryer #2:
***

Wet Milling Operations
Corn Heater Tank, identified as 14V600**, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17**.
~~Steepwater Evaporator Vacuum Pump, identified as 14P510.~~**Steepwater Evaporator Vacuum Pump, identified as 14P510, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.**
Steepwater Evaporator, Vacuum Pump, approved in 2014 for construction, identified as 14P511, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.
Third Grind Receiver Tank, identified as 15V33**, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17**.
Germ Dewatering Press, identified as 15J103, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.
One (1) Dent Starch Slurry Storage Tank, identified as 15V43, constructed in 1966.
120 Degree Water Tank, identified as **21V103**.
Millhouse Floor Water Tank, identified as 21V1
Gluten Filter Seal Water Tank, identified as 21V205

Feed/Meal/Germ Production Operations
***

Syrup Refining Operations
Reject Flash Enzyme Chamber, identified as 18V313.
~~Vacuum Flash Enzyme Chamber, identified as 18V513.~~

Starch Modification Operations

***

Roll Dryer 2 Reslurry Tank, identified as 19V200.

One (1) Starch Reactor, identified as 18V180, constructed in 1994, with emissions uncontrolled, and exhausting to stack 42.

One (1) Starch Reactor, identified as 18V179, constructed in 1994, with emissions uncontrolled, and exhausting to stack 42.

One (1) 10,000 gallon sodium bisulfite Storage Tank, Identified as 18V108, approved in 2014 for construction, with emissions uncontrolled and exhausting to stack 456.

One (1) 10,000 gallon Sodium chlorite Storage Tank, Identified as 18V109, approved in 2014 for construction, with emissions uncontrolled and exhausting to stack 457.

One (1) Roll Dryer Rotary Vacuum Filter, approved 2014 for construction, identified as 18F53, with emissions uncontrolled, and exhausting to stack 163B.

One (1) Roll Dryer Rotary Filter Vacuum Pump, approved in 2014 for construction, identified as 18C233 with emissions uncontrolled, and exhausting to stack 161B.

Starch Drying and Handling Operations

Agglomerator Feed Blender, identified as 50U106.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

***

Compliance Determination Requirements

***

D.1.4 Testing Requirements [326 IAC 2-7-6(1), (6)] ~~[326 IAC 2-7-6(1), (6)]~~ [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.1.1, the Permittee shall perform PM and PM_{10} testing of baghouse 08F300 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 obligations with regard to the performance testing required by this condition. PM_{10} includes filterable and condensable PM.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b) Wet Milling Operations, consisting of:

***

(10) Two (2) Grit Starch Separator Screens, identified as 15J39 and 15J40, approved in 2014 for construction, with emissions voluntarily vented to alkaline scrubber 15F401, and exhausting to stack 17.

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~~(16) One (1) Steeped Corn Surge Hopper, identified as 15V21, constructed in 1966, exhausting to the intake of Steeped Corn Separator 15J5A, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.~~

***

~~(27) Thirty-six (36) Fiber Wash Screens, identified as 1st Stage through 5th Stage Fiber Wash Screens, constructed in 1966, exhausting to the intake of Fiber Wash Receiver Tanks 15V110 through 15V114, and exhausting to Fiber Wash Receiver Tanks 15V110 through 15V114.~~

~~(28) One (1) Dent Starch Slurry Storage Tank, identified as 15V43, constructed in 1966, with emissions controlled by alkaline scrubber 15F401, and exhausting to stack 17.~~

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(~~31~~**29**) Five (5) Fiber Wash Receiver Tanks, identified as 15V110 through 15V114, constructed in 1966, **providing aspiration to 1st through 5th Stage Fiber Wash Screens,** with emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17.

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(39) One (1) Gluten Vacuum Filter, identified as 21F5, approved in 2014 for construction, with emissions voluntarily vented to alkaline scrubber 15F401, and exhausting to stack 17.

(40) One (1) Gluten Vacuum Filter Pump, identified as 21C105, approved in 2014 for construction, with emissions voluntarily vented to alkaline scrubber 15F401, and exhausting to stack 17.

***

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

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

D.2.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3:

(a) The following emission units shall be controlled for sulfur dioxide (SO_2) and VOC using the BACT:

(1) Wet Milling Operations, including 14V3 through 14V16, 14V400, 14V401, 14V402, 18F510, 15J101, 15J203, 14V19, 18V520, 18V522, 15J15 through 15J19, 15J21, 15J22, 15J86, 15J87, 15J88, 15J89, 15J220, 15J221, 15J100, 15J99, 15V25, 15V26, 21V33, ~~15V21,~~ 15J5A, 15V23, 15J53, 15J14, 15J3, 15V22, 15V24, 15V27, 15V2, 14V17, 15V139, 1st Stage through 5th Stage Fiber Wash Screens, ~~15V43,~~ 14V18, 14V20, 15V110 through 15V114, 15V30, 15V41, 15V38, 15V34, 15V35, 15V36, 15V37, 15V40, 15V31, 21F6, 21C6, 21F7, 21C7, 21F8, 21C8, 21F9, 21C9, 21F10, 21C10, 21F100, 21F101, 21V159, 21V59, 21V58, 21V56, and 15V210; and

(2) Feed/Meal/Germ Production Operations, including 21D3.

(b) For these units, the BACT for SO_2 is the use of alkaline scrubber 15F401, and:

(1) When the inlet SO_2 concentration to the scrubber is greater than 150 ppmvw, the scrubber shall have a minimum SO_2 control efficiency of 90%, and the scrubber outlet SO_2 emission rate shall not exceed 8.17 lbs/hr SO_2; and

(2) When the inlet SO_2 concentration to the scrubber is 150 ppmvw or less, the scrubber shall have an outlet SO_2 concentration of less than 15 ppmvw, and the scrubber outlet SO_2 emission rate shall not exceed 8.17 lbs/hr.

(c) For these units, the BACT for VOC is the use of an absorption system using wet scrubber 15F401, and:

(1) The scrubber shall have a minimum VOC control efficiency of 25%; and

(2) The scrubber outlet VOC emission rate shall not exceed 27 lbs/hr.

D.2.2 Prevention of Significant Deterioration (PSD) Minor Limit SO2, VOC [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable to the 2014 modification, the Permittee shall comply with the following:

(a) The uncontrolled SO2 emissions rate from the Grit Starch Separator Screens, identified as 15J39 and 15J40 shall not exceed 0.11 pounds per hour.

(b) The uncontrolled VOC emissions rate from the Grit Starch Separator Screens, identified as 15J39 and 15J40 shall not exceed 0.09 pounds per hour.

(c) The combined uncontrolled SO2 emissions rate from the Gluten Vacuum Filter, identified as 21F5, and the Gluten Filter Vacuum Pump, identified as 21C105, shall not exceed 0.25 pounds per hour.

(d) The combined uncontrolled VOC emissions rate from the Gluten Vacuum Filter, identified as 21F5, and the Gluten Filter Vacuum Pump, identified as 21C105, shall not exceed 1.60 pounds per hour.

Compliance with these limits, in combination with the limits in Conditions D.4.1, D.5.2,

D.7.3, D.8.3 and D.9.2, shall limit the net emissions increase from the 2014 modification to less than twenty-five (25) tons PM, fifteen (15) tons PM10, ten (10) tons PM2.5, forty (40) tons SO2, forty (40) tons NOx, forty (40) tons VOC, and one-hundred (100) tons CO per twelve consecutive month period, and therefore, render the requirements of 326 IAC 2-2 (PSD) not applicable to the 2014 modification.

Compliance Determination Requirements

D.2.~~2~~**3** Sulfur Dioxide (SO_2) and Volatile Organic Compounds (VOC) Control

In order to comply with Condition D.2.1 **and D.2.2**, scrubber 15F401 used for SO_2 and VOC control shall be in operation and control SO_2 and VOC emissions at all times when any of the following emission units that are aspirated to the scrubber are in operation:

(a) Wet Milling Operations, including 14V3 through 14V16, 14V400, 14V401, 14V402, 18F510, 15J101, 15J203, 14V19, 18V520, 18V522, 15J15 through 15J19, 15J21, 15J22, **15J39, 15J40,** 15J86, 15J87, 15J88, 15J89, 15J220, 15J221, 15J100, 15J99, 15V25, 15V26, 21V33, ~~15V21,~~ 15J5A, 15V23, 15J53, 15J14, 15J3, 15V22, 15V24, 15V27, 15V2, 14V17, 15V139, 1st Stage through 5th Stage Fiber Wash Screens, ~~15V43,~~ 14V18, 14V20, 15V110 through 15V114, 15V30, 15V41, 15V38, 15V34, 15V35, 15V36, 15V37, 15V40, 15V31, **21F5, 21C105,** 21F6, 21C6, 21F7, 21C7, 21F8, 21C8, 21F9, 21C9, 21F10, 21C10, 21F100, 21F101, 21V159, 21V59, 21V58, 21V56, and 15V210;

(b) Feed/Meal/Germ Production Operations, including 21D3;

(c) Syrup Refining Operations, including 18V413, **18V513**; and

(d) Insignificant Activities, including 14V600, 14P510, **14P511,** 15V33, 21U403, and 14X20.

D.2.~~3~~**4** 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(b) and D.2.1(c), the Permittee shall perform~~ ~~SO_2~~ ~~and VOC testing of scrubber 15F401 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 obligations with regard to the performance testing required by this condition.~~

(a) In order to demonstrate compliance with Conditions D.2.1(b), D.2.1(c), and D.2.2, the Permittee shall perform SO_2 and VOC testing of scrubber 15F401, utilizing methods as approved by the Commissioner, at least once every five (5) years from the date of the most recent valid compliance demonstration.

(b) In order to demonstrate compliance with Conditions D.2.2 and D.4.1(a) and (b), the Permittee shall perform SO_2 and VOC testing of scrubber 15F401 no later than 180 days after the startup of the Gluten Vacuum Filter, identified as 21F5, the Gluten Filter Vacuum Pump, identified as 21C105, and the Grit Separator Screens, identified as 15J39 and 15J40, and the Jet Conversion Flash Chamber (ID 18V513), utilizing methods as approved by the Commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

(c) 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 obligations with regard to the performance testing required by this condition.

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

D.2.~~4~~**5** Scrubber Parametric Monitoring [40 CFR 64]

***

(b) Pursuant to 40 CFR 64 (CAM), ~~within ninety (90) days from the issuance date of Significant Permit Modification 157-30882-00003,~~ the Permittee shall monitor and record the scrubber make-up water flow from scrubber 15F401 continuously when any of the emission units being aspirated to scrubber 15F401 are in operation.

***

***

D.2.~~5~~**6** Scrubber Failure Detection

***

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

D.2.~~6~~**7** Record Keeping Requirements

(a) To document compliance with Condition D.2.**4**5, the Permittee shall maintain a daily record of:

***

***

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

***

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

***

D.3.10 Scrubber Parametric Monitoring

(a) ***

(1) When, for any one reading, the pH across the scrubber is outside ~~of~~ the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pH between **5.5**~~7~~ and ~~9~~**7.5** unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. A pH reading that is outside the above mentioned range is not a deviation from this permit.

***

***

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: (d) Syrup Refining Operations, consisting of: *** **(4) One (1) Jet Conversion Flash Chamber, identified as 18V513, approved in 2014 for construction, for the production of Maltodextrin, with SO_2 and VOC emissions controlled by an alkaline scrubber 15F401, and exhausting to stack 17**

(see Section D.2 for the control device monitoring requirements).

(~~4~~**5**) ***

(~~5~~**6**) ***

(~~6~~**7**) One (1) Filteraid Conveying System to Precoat Makeup Tank, identified ~~as 09C27 and~~ 18C18, constructed in 1966, with emissions controlled by integral product receiver/baghouse 18F118 ~~and air washer 18F218~~, and exhausting to stack 129.

(~~7~~**8**) One (1) Powdered Carbon Storage Silo, identified as 9V30, loaded pneumatically via Powdered Carbon Unloading System, identified as 9C30, constructed in 1966, with emissions controlled by **bin vent filter 09F30** ~~cyclone 09F36, baghouse 09F30, and air washer 09F1~~, and exhausting to stack 124.

(9) One (1) Powdered Carbon Transfer System, identified as 18C101, approved in 2014 for construction, with emissions controlled by Powdered Carbon Transfer Receiver/Baghouse, identified as 18F101 and exhausting through stack 462. The Powdered Carbon Transfer Receiver/Baghouse is installed to pneumatically transfer carbon from the Powdered Carbon Storage Silo, identified as 9V30, to the precoat vacuum filters.

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

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

D.4.1 Prevention of Significant Deterioration (PSD) Minor Limit SO2, VOC, H2SO4, PM, PM10, PM2.5 [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable to the 2014 modification, the Permittee shall comply with the following:

(a) The SO2 emissions from the Jet Conversion Flash Chamber, identified as 18V513, shall not exceed 1.65 pounds per hour.

(b) The VOC emissions from the Jet Conversion Flash Chamber, identified as 18V513, shall not exceed 0.75 pounds per hour.

(c) The PM emissions from the Powdered Carbon Transfer system shall not exceed 0.004 pounds per hour.

(d) The PM10 emissions from the Powdered Carbon Transfer system shall not exceed 0.004 pounds per hour.

(e) The PM2.5 emissions from the Powdered Carbon Transfer system shall not exceed 0.002 pounds per hour.

Compliance with these limits, in combination with the limits in Conditions D.2.2, D.5.2, D.7.3, D.8.3 and D.9.2, shall limit the net emissions increase from the 2014 modification to less than twenty-five (25) tons PM, fifteen (15) tons PM10, ten (10) tons PM2.5, forty (40) tons SO2, forty (40) tons NOx, forty (40) tons VOC, and one-hundred (100) tons CO per twelve consecutive month period, and therefore, render

D.4.~~1~~**2** Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

The particulate emission rates from facilities 9V31, 9V30, ~~09C27,~~ 18C18, ~~and~~ 9V144**, and 18F101,** shall be limited as follows:

***

(b) The particulate emission rate from ~~baghouse~~ **bin vent filter** 09F30 shall not exceed 0.03 lb/hr.

***

(e) The particulate emission rate from receiver/baghouse 18F101 shall not exceed 0.004 lb/hr.

These limits are more stringent than the 326 IAC 6-3-2 allowable particulate emission rates based on maximum process weight rate for these facilities. Therefore, compliance with these limits shall satisfy compliance with 326 IAC 6-3-2.

Compliance Determination Requirements

D.4.~~2~~**3** Particulate Control [326 IAC 2-7-6(6)]

(a) In order to comply with Condition D.4.~~1~~**2**(a), bin vent 9F31 shall be in operation and control particulate emissions from emission unit 9V31 at all times emission unit 9V31 is in operation.

(b) In order to comply with Condition D.4.~~1~~**2**(b), baghouse 9F30 shall be in operation and control particulate emissions from emission unit 9V30 at all times emission unit 9V30 is in operation.

(c) In order to comply with Condition D.4.~~1~~**2**(c), baghouse 18F118 shall be in operation and control particulate emissions from emission unit ~~09C27 and~~ 18C18 at all times emission unit~~s 09C27 and~~ 18C18 ~~are~~**is** in operation.

(d) In order to comply with Condition D.4.~~1~~**2**(d), eductor/scrubber 9E1 shall be in operation and control particulate emissions from emission unit 9V144 at all times emission unit 9V144 is being loaded.

(e) In order to comply with Condition D.4.1(a) and (b), scrubber 15F401 (Section D.2) shall be in operation and control VOC and SO_2 emissions from emission unit 18V513 at all times emission unit 18V513 is in operation.

(f) In order to comply with Condition D.4.1(c), (d), and (e), receiver/baghouse 18F101 shall be in operation and control particulate emissions from emission unit 18C101 at all times emission unit 18C101 is in operation.

D.4.~~3~~**4** Broken or Failed Bag Detection – Single Compartment Baghouse

***

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

(a) In order to demonstrate compliance Condition D.4.1, not later than 180 days after the startup of the Jet Conversion Flash Chamber, identified as 18V513, the Gluten Vacuum Filter (ID 21F5), the Gluten Filter Vacuum Pump (ID 21C105), and the Grit Separator Screens (IDs 15J39 and 15J40), the Permittee shall perform SO2 and VOC testing of scrubber 15F401 (Section D.2) utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

(b) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

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

D.4.~~4~~**6** Visible Emissions Notations

(a) ***

(b) Visible emission notations of the stacks 129 **and 462** exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

***

***

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

D.4.~~8~~**10** Record Keeping Requirements

(a) To document the compliance status with Condition D.4.~~4~~**6**, the Permittee shall maintain a daily record of visible emission notations of stacks 123, 124, 129, ~~and~~ 149**, and 462** controlling the Syrup Refining Operation exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(b) To document the compliance status with Condition D.4.~~5~~**7**, the Permittee shall maintain observations of scrubber recirculation flow each time soda ash is unloaded from the scrubbers controlling emissions from facility 9C40.

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

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(e) Starch Modification Operations, consisting of:

***

(17) One (1) Propylated Starch Reactor, identified as 45V298, approved in 2014 for construction, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

(18) One (1) Propylated Starch Reactor, identified as 45V299, approved in 2014 for construction, with emissions controlled by scrubber 45F212, and exhausting to stack 50.

***

~~(19) One (1) Oxidized Starch Reactor, identified as 18V180, constructed in 1994 and approved in 2009 for modification and approved in 2010 for modification, with emissions uncontrolled, and exhausting to stack 42.~~

(21) One (1) Oxidized Starch Reactor, identified as 18V274, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stack 455.

(2~~0~~**2**) ***

(2~~1~~**3**) ***

~~(22) One (1) Oxidized Starch Reactor, identified as 18V179, constructed in 1994 and approved in 2010 for modification, with emissions uncontrolled, and exhausting to~~

~~stack 42.~~

(2~~3~~**4**) ***

(2~~4~~**5**) ***

(2~~5~~**6**) ***

(2~~6~~**7**) ***

(2~~7~~**8**) ***

(2~~8~~**9**) ***

(~~29~~**30**) ***

(3~~0~~**1**) ***

(3~~1~~**2**) ***

(3~~2~~**3**) ***

(3~~3~~**4**) ***

(3~~4~~**5**) ***

(3~~5~~**6**) ***

(3~~6~~**7**) ***

(3~~7~~**8**) ***

(3~~8~~**9**) ***

(40) One (1) Flash 4 Slurry Hold Tank, identified as 54V401, approved in 2014 for construction, with potential VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions uncontrolled, and exhausting to stack 419.

(41) One (1) Flash 4 Larox Filter Feed Tank, identified as 54V403, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, all other emissions are uncontrolled, and exhausting to stack 420.

(42) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F421/54V421, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, all other emissions are uncontrolled, and exhausting to stack 421.

(43) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F422/54V422, approved in 2014 for construction, with VOC emissions uncontrolled and aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, all other emissions are uncontrolled, and exhausting to stack 422.

(44) One (1) Flash 4 Larox Filter and Air Release Tank, identified as 54F4MM/54V4MM, approved in 2014 for construction with VOC emissions uncontrolled and

aggregated with the Starch Flash Dryer #4 (54D450) (Section D.7), all other emissions are uncontrolled, all other emissions are uncontrolled, and exhausting to stack 423.

(~~39~~**45**) ***

(4~~0~~**6**) ***

(4~~1~~**7**) ***

(4~~2~~**8**) ***

(4~~3~~**9**) ***

(~~44~~**50**) ***

(~~45~~**51**) ***

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

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

D.5.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

***

VOC BACT has been determined to be the use of a low pH packed bed scrubber (45F212) and hydrolysis and:

(1) ***

(2) The combined propylene oxide input to Starch Modification Operations 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, 45V296, 40Y1, 40V1, 40V50, 40U2, 40V20, 40V21, 40F51, 40F52, 40F53, 40F54, 40V15, 40V16, 40U23, 43V71, 43V72, 43F71, 43F72, 43F73, 43V85, 43V86, 30V1, 30V2, 40V11, 40V12, 40V14, 46V297, 46V201, 46V213, 46V204, 45V117, 45V118, 45V119, 45V120; and Starch Drying and Handling Operations 40D1, 40D20, 43D71, 41D1, 41D2, 41D3, 41D4, 41D5, 41D6, 41D7, 41D8, 30D1, 16D4~~, 16D5~~, 46D200, 19D301, 19D302, and 19D303 shall not exceed 1,500 tons per twelve consecutive month period for propylated starch reactions that do not undergo the acid-kill step.

D.5.2 Avoidance Limits for PSD [326 IAC 2-2]

(a) **Pursuant to 157-30564-00003, and I**~~I~~in order to render the requirements of 326 IAC 2-2 not applicable, the Permittee shall comply with the following:

(~~a~~**1**) The amount of acid-thinned starch produced without peroxide from reactors 45V115, 45V116, and 45V222 shall be limited to fifty million (50,000,000) pounds per twelve (12) consecutive month period with compliance determined at the end of each month.

(~~b~~**2**) The sulfur dioxide (SO_2) emission rate from reactors 45V115, 45V116, and 45V222 shall not exceed 43 pounds SO_2 per 100,000 pounds of acid-thinned starch, combined.

(b) **In order to render the requirements of 326 IAC 2-2 not applicable to the 2014 modification, the Permittee shall comply with the following:**

(1) Two (2) Propylated Starch Reactors, identified as 45V298 and 45V299, controlled by scrubber 45F212

(A) The combined throughput to the two Propylated Starch Reactors shall be limited to a total of 60 million pounds of propylated starch per twelve (12) consecutive month period with compliance determined at the end of each month.

(B) A VOC emission rate of 3.25 lb per 100,000 lb of acid-killed starch and 6.0 lb per 100,000 lbs of non-acid-killed starch for Propylene Oxide Starch Reactors.

(C) The amount of propylene oxide used in propylated starch reactions that do not undergo the 'acid kill step' shall be limited to 4.0 million pounds per twelve (12) consecutive month period with compliance determined at the end of each month.

(2) The VOC emissions from Oxidized Starch Reactor, identified as 18V274

(A) The amount of oxidized starch produced from reactor 18V274 shall be limited to forty-eight point seven million (48,700,000) pounds per twelve (12) consecutive month period with compliance determined at the end of each month.

(B) The VOC emission rate from reactor 18V274 shall not exceed 42.7 pounds VOC per 100,000 pounds of oxidized starch.

~~Compliance with the above limits shall render the requirements of 326 IAC 2-2 not applicable to emission units 45V115, 45V116, and 45V222.~~
Compliance with these limits, in combination with the limits in Conditions D.2.2, D.4.1, D.5.2, D.7.3, D.8.3 and D.9.2, shall limit the net emissions increase from the 2014 modification to less than twenty-five (25) tons PM, fifteen (15) tons PM10, ten (10) tons PM2.5, forty (40) tons SO2, forty (40) tons NOx, forty (40) tons VOC, and one-hundred (100) tons CO per twelve consecutive month period, and therefore, render the requirements of 326 IAC 2-2 (PSD) not applicable to the 2014 modification.

.
***

D.5.4 Volatile Organic Compounds (VOC) BACT [326 IAC 8-1-6] [326 IAC 2-2-3]

***

VOC BACT has been determined to be the use of a low pH packed bed scrubber (45F212) and hydrolysis and

(a) ***

(b) The combined propylene oxide input to Starch Modification Operations 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, 45V296, 40Y1, 40V1, 40V50, 40U2, 40V20, 40V21, 40F51, 40F52, 40F53, 40F54, 40V15, 40V16, 40U23, 43V71, 43V72, 43F71, 43F72, 43F73, 43V85, 43V86, 30V1, 30V2, 40V11, 40V12, 40V14, 46V297, 46V201, 46V213, 46V204, 45V117, 45V118, 45V119, 45V120; and Starch Drying and Handling Operations 40D1, 40D20, 43D71, 41D1, 41D2, 41D3, 41D4, 41D5, 41D6, 41D7, 41D8, 30D1, 16D4~~, 16D5~~, 46D200, 19D301, 19D302, and 19D303 shall not exceed 1,500 tons per twelve consecutive month period for propylated starch reactions that do not undergo the acid-kill step.

D.5.5 Avoidance Limits for HAPs [326 IAC 2-4.1]

***

VOC BACT has been determined to be the use of a low pH packed bed scrubber (45F212) and hydrolysis and:

(a) ***

(b) The combined propylene oxide input to Starch Modification Operations 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, 45V296, 40Y1, 40V1, 40V50, 40U2, 40V20, 40V21, 40F51, 40F52, 40F53, 40F54, 40V15, 40V16, 40U23, 43V71, 43V72, 43F71, 43F72, 43F73, 43V85, 43V86, 30V1, 30V2, 40V11, 40V12, 40V14, 46V297, 46V201, 46V213, 46V204, 45V117, 45V118, 45V119, 45V120; and Starch Drying and Handling Operations 40D1, 40D20, 43D71, 41D1, 41D2, 41D3, 41D4, 41D5, 41D6, 41D7, 41D8, 30D1, 16D4~~, 16D5~~, 46D200, 19D301, 19D302, and 19D303 shall not exceed 1,500 tons per twelve consecutive month period for propylated starch reactions that do not undergo the acid-kill step.

Compliance with these limits will render the requirements of 326 IAC 2-4.1 not applicable to emission units 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, and 45V296.

****

Compliance Determination Requirements

D.5.6 Volatile Organic Compounds (VOC) and Hazardous Air Pollutant (HAP) Control

In order to comply with Conditions D.5.1, **D.5.2,** D.5.4, and D.5.5, scrubber 45F212 shall be in operation and control VOC and HAP emissions from emission units 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, ~~and~~ 45V296, **45V298, and 45V299** at all times any of those emission units are in operation.

***

D.5.9 Testing Requirements ~~[326 IAC 2-7-6(1), (6)]~~ [326 IAC 2-1.1-11]

~~In order to demonstrate compliance with Conditions D.5.1, D.5.4, and D.5.5, the Permittee shall perform VOC testing of scrubber 45F212 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 obligations with regard to the performance testing required by this condition.~~

(a) In order to demonstrate compliance with Conditions D.5.1, D.5.4, and D.5.5, the Permittee shall perform VOC testing of scrubber 45F212 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration.

(b) No later than 180 from the startup of Propylated Starch Reactors (45V298 and 45V299), in order to demonstrate compliance with Conditions D.5.1, D.5.2(b)(1), D.5.4, and D.5.5, the Permittee shall perform VOC testing of scrubber 45F212 utilizing methods as approved by the Commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

(c) No later than 180 from the startup of Oxidized Starch Reactor, identified as 18V274, in order to demonstrate compliance with Condition D.5.2(b)(2), the Permittee shall perform VOC testing of stack 455 utilizing methods as approved by the

Commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

(d) **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 obligations with regard to the performance testing required by this condition.**

***

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

D.5.14 Record Keeping Requirements

(a) To document the compliance status with Conditions D.5.1, D.5.4, and D.5.5, the Permittee shall maintain monthly records for propylated starch reactions that do not undergo the acid-kill step to Starch Modification Operations 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, 45V296, 40Y1, 40V1, 40V50, 40U2, 40V20, 40V21, 40F51, 40F52, 40F53, 40F54, 40V15, 40V16, 40U23, 43V71, 43V72, 43F71, 43F72, 43F73, 43V85, 43V86, 30V1, 30V2, 40V11, 40V12, 40V14, 46V297, 46V201, 46V213, 46V204, 45V117, 45V118, 45V119, 45V120; and Starch Drying and Handling Operations 40D1, 40D20, 43D71, 41D1, 41D2, 41D3, 41D4, 41D5, 41D6, 41D7, 41D8, 30D1, 16D4, ~~16D5,~~ 46D200, 19D301, 19D302, and 19D303.

Note that this record is the same record as required in Condition **D.7.14(a)**~~D.7.13(a)~~.

(b) To document the compliance status with Condition **D.5.1(a) and** D.5.2**(b)(2)** the Permittee shall maintain monthly records of the amount of acid-thinned starch produced without peroxide from reactors 45V115, 45V116, and 45V222 **and the amount of oxidized starch produced from reactor 18V274**.

***

(e) **To document the compliance status with condition D.5.2 (b)(1), the Permittee shall maintain monthly record of:**

(1) **The total throughput of the propylated starch to the two Propylated Starch Reactors, identified as 45V298 and 45V299.**

(2) **The amount of propylene oxide used in propylated starch reactions that do not undergo the 'acid kill step' in the Propylated Starch Reactors, identified as 45V298 and 45V299.**

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

D.5.15 Reporting Requirements

(a) **A quarterly report of the total throughput of the propylated starch to the two propylated starch reactors, identified as 45V298 and 45V299 to document the compliance status with Conditions D.5.2(b) shall be submitted not later than thirty (30) days after the end of the quarter being reported.**

(b) **A quarterly report of the amount of propylene oxide used in propylated starch reactions that do not undergo the 'acid kill step' in the Propylated Starch Reactors, identified as 45V298 and 45V299 to document the compliance status with Conditions D.5.2(b) shall be submitted not later than thirty (30) days after the end of the quarter being reported.**

(c) 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.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(g) Starch Drying and Handling Operations, consisting of:

***

(37) One (1) 41 Building House Vacuum System, identified as 41F133, constructed in 2012, with emissions controlled by baghouse 41F133, and exhausting to stack 445.

(3~~7~~**8**) ***

(3~~8~~**9**) ***

(~~39~~**40**) ***

(4~~0~~**1**) ***

(4~~1~~**2**) ***

~~(42) One (1) Special Starch Belt Dryer D5, identified as 16D5, constructed in 1966, with emissions controlled by the rotoclone scrubbers 16F27 and 17F79, and exhausting to stack 177.~~

(43) One (1) Belts Product Conveying Mill Product to Bins ~~#3, ~~#4, and #5, identified as 7F25, constructed in 1966, with emissions controlled by integral product collector/baghouse 7F25, and exhausting to stack 103.

~~(44) One (1) Belts Product Conveying Mill Product to Bins #1, #2, and #3, identified as 7F26, constructed in 1966, with emissions controlled by integral product collector/baghouse 7F26, and exhausting to stack 104.~~

(4~~5~~**4**) ***

(4~~6~~**5**) ***

(4~~7~~**6**) ***

(4~~8~~**7**) ***

(4~~9~~**8**) ***

(~~50~~**49**) ***

(5~~1~~**0**) ***

(5~~2~~**1**) ***

(5~~3~~**2**) ***

(5~~4~~**3**) ***

(5~~5~~**4**) ***

(5~~6~~**5**) ***

(5~~7~~**6**) ***

(5~~8~~**7**) ***

(5~~9~~**8**) ***

(~~60~~**59**) ***

(60) One (1) Starch Roll Dryer #304, identified as 19D304, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stacks 408A and 408B.

(61) One (1) Starch Roll Dryer #305, identified as 19D305, approved in 2014 for construction, with emissions uncontrolled, and exhausting to stacks 409A and 409B.

(6~~4~~**2**) ***

(6~~5~~**3**) ***

(6~~6~~**4**) ***

(6~~7~~**5**) ***

(6~~8~~**6**) ***

(67) #2 Starch Agglomerator, identified as 52D210, approved in 2014 for construction, controlled by four product collection cyclones (52F220 - 52F223) followed by baghouse 52F230, and exhausting to stack 361. #2 Starch Agglomerator system consists of the following:

(A) One (1) dryer equipped with a direct-fired natural gas low NOx burner, with heat input capacity of 20 MMBtu/hr.

(B) One (1) mechanical fluid bed, identified as 52Y211, aspirated to the inlet of the agglomerator.

(C) One (1) fines recycle system, identified as 52C221, transferring product to the inlet of the agglomerator.

(D) One (1) #5 tote packing system with head hopper, identified as 52V245 and tote packer, identified as 52Z245 aspirated to the agglomerator #2 packer dust collector, identified as 52F225, exhausting via vent 362 to stack 361.

(E) One (1) #7 bag packing system with head hopper, identified as 52V247 and bag packer, identified as 52Z247 aspirated to the agglomerator #2 packer dust collector, identified as 52F225, exhausting via vent 362 to

stack 361. General aspiration of the packer #7 bag conveying equipment is by the packer #6 House Dust Collector, identified as 56F602.

(F) One (1) reprocess bag dump, identified as 52V225, aspirated to the agglomerator #2 packer dust collector, identified as 52F225, and exhausting via vent 362 to stack 361. Reprocessed product is also transferred via a blower, identified as 52C224 to the packer dust collector, identified as 52F225, from the bag dump.

(68) Two (2) product storage bins, identified as 52V250 and 52V251, controlled by bin vent filters, identified as 52F250 and 52F251, and exhausting to stacks 401 and 402. Only one of the two product storage bins can receive product from the agglomerator at any time.

(69) #4 Starch Flash Dryer, identified as 54D450, approved in 2014 for construction, controlled by six product collection cyclones, identified as 54F451-54F456, followed by a wet scrubber, identified as 54F460, and exhausting to stack 388. #4 Starch Flash Dryer System consists of the following:

(A) One (1) dryer equipped with a direct-fired natural gas low-NOx burner, with heat input capacity of 32MMBtu/hr.

(B) One (1) Starch Densifier Mill Surge Hopper, identified as 54V470, controlled by bin vent filter, identified as 54F471, and exhausting to stack 389.

(C) Three (3) Product Storage Bins, identified as 54V440, 54V441, and 54V4CC, equipped with bin vent filters, identified as 54F440, 54F441, and 54F4CC, and exhausting to stacks 385, 386, and 387.

(D) One (1) Product Bin #1, identified as 07V50, approved in 2014 for construction, formerly associated with Special Belt Dryer 16D5, with emissions controlled by bin vent 07F73, and exhausting to stack 109.

(E) One (1) Product Bin #2, identified as 07V49, approved in 2014 for construction, formerly associated with Special Belt Dryer 16D5, with emissions controlled by bin vent 07F72, and exhausting to stack 108.

(F) One (1) Product Bin #3, identified as 07V48, approved in 2014 for construction, formerly associated with Special Belt Dryer 16D5, with emissions controlled by bin vent 07F71, and exhausting to stack 107.

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

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

D.7.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3:

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(e) The following emission units shall be controlled for VOC using BACT:

Propylated Starch Reactors, identified as 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, and 45V296.

VOC BACT has been determined to be the use of a low pH packed bed scrubber (45F212) and hydrolysis, and:

(1) A VOC emission rate of 3.25 lb per 100,000 lb of acid-killed starch and 6.0 lb per 100,000 lbs of non-acid-killed starch for Propylene Oxide Starch Reactors (equivalent to minimum 95% overall control efficiency).

(2) The combined propylene oxide input to Starch Modification Operations 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, 45V296, 40Y1, 40V1, 40V50, 40U2, 40V20, 40V21, 40F51, 40F52, 40F53, 40F54, 40V15, 40V16, 40U23, 43V71, 43V72, 43F71, 43F72, 43F73, 43V85, 43V86, 30V1, 30V2, 40V11, 40V12, 40V14, 46V297, 46V201, 46V213, 46V204, 45V117, 45V118, 45V119, 45V120; and Starch Drying and Handling Operations 40D1, 40D20, 43D71, 41D1, 41D2, 41D3, 41D4, 41D5, 41D6, 41D7, 41D8, 30D1, 16D4~~, 16D5~~, 46D200, 19D301, 19D302, and 19D303 shall not exceed 1,500 tons per twelve consecutive month period for propylated starch reactions that do not undergo the acid-kill step.

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D.7.3 Prevention of Significant Deterioration (PSD) Minor Limit PM, PM10, PM2.5, SO2, VOC [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable to the 2014 modification, the applicant shall comply with the following:

(a) Starch Roll Dryer #304 (ID 19D304) and Starch Roll Dryer #305 (ID 19D305)

(1) The VOC emissions from each dryer shall not exceed 6 pounds per 100,000 pounds of propylated starch.

(2) The combined throughput to the Starch Roll Dryer #304 (ID 19D304) and Starch Roll Dryer #305 (ID 19D305) shall be limited to a total of 56 million pounds of starch per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) #2 Starch Agglomerator, identified as 52D210, Mechanical Fluid Bed, identified as 52Y211, and Fine Recycle System, identified as 52C221

(1) The combined PM emissions from #2 Starch Agglomerator, identified as 52D210, Mechanical Fluid Bed, identified as 52Y211, and Fine Recycle System, identified as 52C221, shall not exceed 2.00 lb/hr.

(2) The combined PM10 emissions from #2 Starch Agglomerator, identified as 52D210, Mechanical Fluid Bed, identified as 52Y211, and Fine Recycle System, identified as 52C221, shall not exceed 3.08 lb/hr.

(3) The combined PM2.5 emissions from #2 Starch Agglomerator, identified as 52D210, Mechanical Fluid Bed, identified as 52Y211, and Fine Recycle System, identified as 52C221, shall not exceed 2.19 lb/hr.

(4) The NOx emissions from the low NOx burner shall not exceed 0.04 lb/MMBtu.

(5) The CO emissions from the low NOx burner shall not exceed 0.08 lb/MMBtu.

(c) The PM emissions from #5 tote packing system with head hopper, identified as

52V245, tote packer, identified as 52Z245, #7 bag packing system with head hopper, identified as 52V247, bag packer, identified as 52Z247, reprocess bag dump, identified as 52V225, blower, identified as 52C224, shall not exceed 0.13 lb/hr.

(d) The PM10 emissions from #5 tote packing system with head hopper, identified as 52V245, tote packer, identified as 52Z245, #7 bag packing system with head hopper, identified as 52V247, bag packer, identified as 52Z247, reprocess bag dump, identified as 52V225, blower, identified as 52C224, shall not exceed 0.13 lb/hr.

(e) The PM2.5 emissions from #5 tote packing system with head hopper, identified as 52V245, tote packer, identified as 52Z245, #7 bag packing system with head hopper, identified as 52V247, bag packer, identified as 52Z247, reprocess bag dump, identified as 52V225, blower, identified as 52C224, shall not exceed 0.069 lb/hr.

(f) Two (2) product storage bins, identified as 52V250and 52V251

(1) The PM emissions from product storage bins, identified 52V250 and 52V251, shall not exceed 0.08 lb/hr, each.

(2) The PM10 emissions from product storage bins, identified 52V250 and 52V251, shall not exceed 0.08 lb/hr, each.

(3) The PM2.5 emissions from product storage bins, identified 52V250 and 52V251, shall not exceed 0.043 lb/hr, each.

(4) Only one (1) of the two (2) product storage bins, identified as 52V250 and 52V251, shall be in operation at time.

(g) #4 Starch Flash Dryer (54D450)

(1) The VOC emissions from the #4 Starch Flash Dryer (54D450), including VOC emissions from the Flash 4 Slurry Hold Tank (54V401), Flash 4 Larox Filter Feed Tank (54V403), and Flash 4 Larox Filters (54F421, 54F422, and 54F4MM) and Flash 4 Air Release Tanks (54V421, 54V422, and 54V4MM), shall not exceed 6 pounds per 100,000 pounds of propylated starch.

(2) The propylated starch production on #4 Starch Flash Dryer (54D450), shall be limited to a total of 250 million pounds of propylated starch per twelve (12) consecutive month period with compliance determined at the end of each month.

(3) The PM emissions from #4 Starch Flash Dryer, identified 54D450, shall not exceed 4.46 lb/hr.

(4) The PM10 emissions from #4 Starch Flash Dryer, identified 54D450, shall not exceed 6.4 lb/hr.

(5) The PM2.5 emissions from #4 Starch Flash Dryer, identified 54D450, shall not exceed 4.91 lb/hr.

(6) The NOx emissions from the low NOx burner shall not exceed 0.04 lb/MMBtu.

(7) The CO emissions from the low NOx burner shall not exceed 0.08 lb/MMBtu.

(h) The PM emissions from Starch Densifier Mill Surge Hopper, identified as 54V470, shall not exceed 0.02 lb/hr.

(i) The PM10 emissions from Starch Densifier Mill Surge Hopper, identified as 54V470, shall not exceed 0.02 lb/hr.

(j) The PM2.5 emissions from Starch Densifier Mill Surge Hopper, identified as 54V470, shall not exceed 0.01 lb/hr.

(k) The PM emissions from the three (3) Product Storage Bins, identified as 54V440, 54V441, and 54V4CC, shall not exceed 0.23 lb/hr each.

(l) The PM10 emissions from the three (3) Product Storage Bins, identified as 54V440, 54V441, and 54V4CC, shall not exceed 0.23 lb/hr each.

(m) The PM2.5 emissions from the three (3) Product Storage Bins, identified as 54V440, 54V441, and 54V4CC, shall not exceed 0.129 lb/hr each.

(n) The PM emissions from the Product Bins #1, #2, and #3, identified as 07V50, 07V49, 07V48 shall not exceed 0.23 lb/hr each.

(o) The PM10 emissions from the Product Bins #1, #2, and #3, identified as 07V50, 07V49, 07V48 shall not exceed 0.23 lb/hr each.

(p) The PM2.5 emissions from the Product Bins #1, #2, and #3, identified as 07V50, 07V49, 07V48 shall not exceed 0.129 lb/hr each.

(q) PM emissions from 41 building house vacuum system shall not exceed 0.04 lb/hr.

(r) PM10 emissions from 41 building house vacuum system shall not exceed 0.04 lb/hr.

(s) $PM_{2.5}$ emissions from 41 building house vacuum system shall not exceed 0.04 lb/hr.

Compliance with these limits, in combination with the limits in Conditions D.2.2, D.4.1, D.5.2, D.8.3 and D.9.2, shall limit the net emissions increase from the 2014 modification to less than twenty-five (25) tons PM, fifteen (15) tons PM10, ten (10) tons PM2.5, forty (40) tons SO2, forty (40) tons NOx, forty (40) tons VOC, and one-hundred (100) tons CO per twelve consecutive month period, and therefore, render the requirements of 326 IAC 2-2 (PSD) not applicable to the 2014 modification.

D.7.~~3~~**4** Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

The particulate emission rates from emission units 43V90, 40F7, 25F1, 25G1, 16D4~~, 16D5~~, 7F25, ~~7F26,~~ 7V50, 7V49, 7V48, 7V47, ~~and~~ 7V46**, 52D210, 52Y211, 52C221, 54D450, 54V470, 52V245, 52Z245, 52V247, 52Z247, 52V225, 52C224, 54V440, 54V441, 54V4CC, 07V50, 07V49, 07V48, 52V250, and 52V251** shall be limited as follows:

(a) The particulate emission rate from bin vent 43F90 shall not exceed 0.03 lb/hr. Note: This particulate emission rate limit is more restrictive than the limit provided under Condition D.7.2(b) and represents the PTE of the emission unit after control.

(b) The particulate emission rates from baghouses 7F25 ~~and 7F26~~ shall not exceed 0.03 lb/hr~~, each~~.

(c) The particulate emission rate from baghouse 40F7 shall not exceed 0.15 lb/hr. Note: This particulate emission rate limit is more restrictive than the limit provided under Condition D.7.2(a) and represents the PTE of the emission unit after control.

(d) The particulate emission rate from baghouse 25F1 shall not exceed 0.05 lb/hr.

(e) The particulate emission rate from baghouse 25F2 shall not exceed 0.23 lb/hr.

(f) The particulate emission rates from scrubbers 16F26 and 17F78 shall not exceed 3.89 lb/hr, combined.

~~(g) The particulate emission rates from scrubbers 16F27 and 17F79 shall not exceed 3.89 lb/hr, combined.~~

(~~h~~**g**) The particulate emission rates from bin vents ~~7F73, 7F72, 7F71,~~ 7F70, and 7F69 shall not exceed 0.06 lb/hr, each.

(h) The combined PM emissions from Agglomerator #2, identified as 52D210, Mechanical Fluid Bed, identified as 52Y211 and Fine Recycle System, identified as 52C221, shall not exceed 2.00 lb/hr.

(i) The PM emissions from #4 Starch Flash Dryer, identified 54D450, shall not exceed 4.46 lb/hr.

(j) The PM emissions from Starch Densifier Mill Surge Hopper, identified as 54V470, shall not exceed 0.02 lb/hr.

(k) The PM emissions from #5 tote packing system with head hopper, identified as 52V245, tote packer, identified as 52Z245, #7 bag packing system with head hopper, identified as 52V247, bag packer, identified as 52Z247, reprocess bag dump, identified as 52V225, blower, identified as 52C224, shall not exceed 0.13 lb/hr.

(l) The PM emissions from the three (3) Product Storage Bins, identified as 54V440, 54V441, and 54V4CC, shall not exceed 0.23 lb/hr each.

(m) The PM emissions from the Product Bins #1, #2, and #3, identified as 07V50, 07V49, and 07V48 shall not exceed 0.23 lb/hr each.

(n) The PM emissions from product storage bins, identified 52V250 and 52V251, shall not exceed 0.08 lb/hr each.

These limits are more stringent than the 326 IAC 6-3-2 allowable particulate emission rates based on maximum process weight rate for these facilities. Therefore, compliance with these limits shall satisfy compliance with 326 IAC 6-3-2.

D.7.4**5** Volatile Organic Compounds (VOC) BACT [326 IAC 8-1-6] [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 and 326 IAC 8-1-6 as established in to PSD/SSM No. 157-18832-00003 and PSD/SSM 157-22808-00003, the following emission units shall be controlled for VOC using BACT:

Propylated Starch Reactors, identified as 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, and 45V296.

VOC BACT has been determined to be the use of a low pH packed bed scrubber (45F212) and hydrolysis and

(a) A VOC emission rate of 3.25 lb per 100,000 lb of acid-killed starch and 6.0 lb per 100,000 lbs of non-acid-killed starch for Propylene Oxide Starch Reactors (equivalent to minimum 95% overall control efficiency).

(b) The combined propylene oxide input to Starch Modification Operations 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, 45V296, 40Y1, 40V1, 40V50, 40U2, 40V20, 40V21, 40F51, 40F52, 40F53, 40F54, 40V15, 40V16, 40U23, 43V71, 43V72, 43F71, 43F72, 43F73, 43V85, 43V86, 30V1, 30V2, 40V11, 40V12, 40V14, 46V297, 46V201, 46V213, 46V204, 45V117, 45V118, 45V119, 45V120; and Starch Drying and Handling Operations 40D1, 40D20, 43D71, 41D1, 41D2, 41D3, 41D4, 41D5, 41D6, 41D7, 41D8, 30D1, 16D4~~, 16D5~~, 46D200, 19D301, 19D302, and 19D303 shall not exceed 1,500 tons per twelve consecutive month period for propylated starch reactions that do not undergo the acid-kill step.

Compliance Determination Requirements

D.7.~~5~~**6** Particulate Control

(a) In order to comply with Conditions D.7.1, D.7.2, and D.7.~~3~~**4**, scrubbers 40F3, 40F26, 43F80, 16F26, **and** 17F78~~, 16F27, and 17F79~~ for particulate control shall be in operation and control emissions from facilities 40D1, 40D20, 43D71, **and** 16D4~~, and~~ ~~16D5~~ at all times the respective facilities are in operation.

(b) In order to comply with Conditions D.7.1, D.7.2, and D.7.~~3~~**4**, baghouses 40F7, 25F1, 25F2, 40F28, 40F29, 40F88, 41F200, 41F210, 41F201, 41F211, 30F2, 30F3, 41F14, 41F15, 7F25, ~~7F26,~~ 50F102, 50F106, 46F231, 46F232, 30F15, 19F402, 41F20, and 41F21 for particulate control shall be in operation and control particulate emissions from emission units 40F7, 25F1, 25G1, 40G20, 40G21, 40G88, 41F200, 41G200, 41F201, 41G201, 30D1, 41C145, 7F25~~, 7F26~~, 50D101, 50V111, 50V112, 50F106, 46D200, 30G1, 19G401, and 41C35 at all times those emission units are in operation.

(c) In order to comply with Conditions D.7.1, D.7.2, and D.7.~~3~~**4**, bin vents 43F90, 7F8, 7F9, 7F20, 7F21, 7F22, 7F23, 7F34, 7F35, 7F91, 7F92, 41F10, 41F11, 41F13, 41F16, 41F17, 7F73, 7F72, 7F71, 7F70, 7F69, 41F45, 41F46, 41F47, 33F44, 41F22, and 41F23 for particulate control shall be in operation and control particulate emissions from emission units 43V90, 7V8, 7V9, 7V20, 7V21, 7V22, 7V23, 40F27, 7V34, 7V35, 7V91, 7V92, 41V10, 41V11, 41F13, 41V14, 41V15, 7V50, 7V49, 7V48, 7V47, 7V46, 41V45, 41V46, 41V47, 33V44, 30F13, 41V17, and 41V18 at all times those facilities are in operation.

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(f) In order to comply with Conditions D.7.3 and D.7.4, scrubber 54F460 for particulate control shall be in operation and control emissions from facility 54D450 at all times the respective facility is in operation.

(g) In order to comply with Conditions D.7.3 and D.7.4, baghouses 41F133, 52F225, 52F230, 52F250, 52F251, 54F471, 54F440, 54F441, 54F4CC, 07F71, 07F72, and 07F73 for particulate control shall be in operation and control particulate emissions from emission units 41F133, 52V245, 52Z245, 52V247, 52Z247, 52V225, 52C224, 52D210, 52Y211, 52C221, 52V250, 52V251, 54V470, 54V440, 54V441, 54V4CC, 07V48, 07V49, and 07V50 at all times those emission units are in operation.

D.7.~~6~~**7** Broken or Failed Bag Detection – Single Compartment Baghouse

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D.7.~~7~~**8** Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) In order to demonstrate compliance with Condition D.7.1(a), the Permittee shall perform PM and PM_{10} testing of emission unit 19G401 and one of the emission units 40G20 and 40G21 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. **PM_{10} includes both filterable and condensable PM.** ~~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 obligations with regard to the performance testing required by this condition. PM_{10} includes filterable and condensable PM.~~

(b) In order to demonstrate compliance with Condition D.7.1(b), not later than 180 days after the issuance of this permit, T157-27029-00003, the Permittee shall perform PM and PM_{10} testing of emission unit 46D200 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. **PM_{10} includes both filterable and condensable PM.** ~~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 obligations with regard to the performance testing required by this condition. PM_{10} includes filterable and condensable PM.~~

(c) In order to demonstrate compliance with Condition D.7.1(c), the Permittee shall perform PM and PM_{10} testing of emission unit 40D20 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. **PM_{10} includes both filterable and condensable PM.** ~~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 obligations with regard to the performance testing required by this condition. PM_{10} includes filterable and condensable PM.~~

(d) In order to demonstrate compliance with Conditions D.7.1(e) and D.7.4**5**(a), the Permittee shall perform VOC testing of scrubber 45F212 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 obligations with regard to the performance testing required by this condition.~~

(e) In order to demonstrate compliance with Condition D.7.3(a), not later than 180 days after the startup of Starch Roll Dryers #304 and #305 Permittee shall perform VOC testing on either Starch Roll Dryer #304 or #305 utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance

(f) In order to demonstrate compliance with Condition D.7.3(b)(1), (2), and (3), not later than 180 days after the startup of the Agglomerator #2, identified as 52D210, the Mechanical Fluid Bed, identified as 52Y211, and the Fine Recycle System, identified as 52C221, the Permittee shall perform PM, PM10, and PM2.5 testing utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM_{10} and $PM_{2.5}$ includes both filterable and condensable PM.

(g) In order to demonstrate compliance with Conditions D.7.3(c), (d), and (e) and Conditions D.8.3(a), 8.3(b), and 8.3(c) in Starch Packaging and Loadout Operations, the Permittee shall perform PM, PM10, and PM2.5 testing on one of the two product receiver bagfilters controlling these emission units utilizing methods approved by the commissioner not later than 180 days after the startup of the #5 tote packing system with head hopper, identified as 52V245, tote packer, identified as 52Z245, #7 bag packing system with head hopper, identified as 52V247, bag packer, identified as 52Z247, reprocess bag dump, identified as 52V225, blower, identified as 52C224, or not later than 180 days after the startup of the Packer #6 Product Receiver, identified as 56F601, Packer #6 Head Hopper, identified as 56V600, Packer #6, identified as 56Z600, Reprocess Bag Dump Transfer Line, identified as 56C630. The unit tested shall be the unit in which the longest amount of time has elapsed since its previous test. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM_{10} and $PM_{2.5}$ includes both filterable and condensable PM.

(h) In order to demonstrate compliance with Conditions D.7.3(f)), not later than 180 days after the startup of the product storage bins, identified as 52V250 and 52V251, the Permittee shall perform PM, PM10, and PM2.5 testing on one of the bin vent filters controlling these emission units utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM_{10} and $PM_{2.5}$ includes both filterable and condensable PM.

(i) In order to demonstrate compliance with Condition D.7.3(g), not later than 180 days after the startup of the #4 Starch Flash Dryer, identified as 54D450, the Permittee shall perform PM, PM10, and PM2.5 testing utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM_{10} and $PM_{2.5}$ includes both filterable and condensable PM.

(j) In order to demonstrate compliance with Condition D.7.3(h), (i), and (j), not later than 180 days after the startup of the Starch Densifier Mill Surge Hooper, identified as 54V470, the Permittee shall perform PM, PM10, and PM2.5 testing utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM_{10} and $PM_{2.5}$ includes both filterable and condensable PM.

(k) In order to demonstrate compliance with Conditions D.7.3(k), (l), and (m), and **Condition D.7.3(n), (o), and (p), not later than 180 days after the startup of the three (3) Product Storage Bins, identified as 54V440, 54V441, 54V4CC or the three (3) Product Bins #3, #2, #1, identified as 07F73, 07F72, and 07F71 the Permittee shall perform PM, PM10, and PM2.5 testing on one of the six (6) bin vent filters controlling these units utilizing methods approved by the commissioner. The product storage bin tested shall be the bin in which the longest amount of time has elapsed since its previous test. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM_{10} and $PM_{2.5}$ includes both filterable and condensable PM.**

(l) 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 obligations with regard to the performance testing required by this condition.

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

D.7.~~8~~**9** Visible Emissions Notations

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(b) Visible emission notations of the stacks' 70, 71, 72, 76, 77, 78, 87, 88, 89, 90, 103, ~~104,~~ 105, 106, 107, 108, 109, 146, 147, 226, 248, 255, 266, 267, 268, 269, 274, 345, 346, 355, **361,** 366, **385, 386, 387, 388, 389, 401, 402** and 432 exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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D.7.~~9~~**10** Scrubber Parametric Monitoring [40 CFR 64]

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(d) The Permittee shall monitor and record the recirculation rate from scrubbers 16F26, 17F78~~, 16F27, and 17F79~~ at least once per day when emission units **and** 16D4~~ and 16D5~~ are in operation.

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(2) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Condition **D.7.4(f)** ~~D.7.3(f) and D.7.3(g)~~

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(e) The Permittee shall monitor and record the recirculation rate from scrubber 54F460 continuously when emission unit 54D450 is in operation.

(1) From the date of startup until the stack test results are available, the Permittee shall maintain the flow rate at or above the minimum of 1,000 gallons per minute. If the flow rate falls below 1,000 gallons per minute, the Permittee shall take a reasonable response.

(2) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Condition D.7.3(g).

(3) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate as observed during the latest compliant stack test. If the flow rate falls below the level observed during the latest compliant stack test, the Permittee shall take a reasonable response.

(4) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A flow rate 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.

(~~e~~**f**) ***

D.7.1~~0~~**1** Baghouse Parametric Monitoring

(a) ***

(b) The Permittee shall record the pressure drop across baghouses 25F2, 40F28, 40F29, 40F88, 41F210, 41F211, 19F402, 30F15, ~~and~~ 50F102, **and 52F230** used in conjunction with emission units 25G1, 40G20, 40G21, 40G88, 41G200, 41G201, 19G401, 30G1, ~~and~~ 50D101**, and 52D210** at least once per day when the respective emission units are in operation.

***

D.7.1~~1~~**2** Scrubber Failure Detection

In the event that scrubber failure for emission units 40D20, 43D71, 40D1, 16D4, and/or **54D450**~~16D5~~ has been observed:

The feed to the process shall be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the 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).

D.7.1~~2~~**3** Broken or Failed Bag Detection – Multi-Compartment Baghouse

***

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

D.7.1~~3~~**4** Record Keeping Requirements

(a) To document the compliance status with Conditions D.7.1(e) and D.7.~~4~~**5**, the Permittee shall maintain monthly records for propylated starch reactions that do not undergo the acid-kill step to Starch Modification Operations 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, 45V296, 40Y1, 40V1, 40V50, 40U2, 40V20, 40V21, 40F51, 40F52, 40F53, 40F54, 40V15, 40V16, 40U23, 43V71, 43V72, 43F71, 43F72, 43F73, 43V85, 43V86, 30V1, 30V2, 40V11, 40V12, 40V14, 46V297, 46V201, 46V213, 46V204, 45V117, 45V118, 45V119, 45V120; and Starch Drying and Handling Operations 40D1, 40D20, 43D71, 41D1, 41D2, 41D3, 41D4, 41D5, 41D6, 41D7, 41D8, 30D1, 16D4, 46D200, 19D301, 19D302, and 19D303.

Note that this record is the same record as required in Condition D.5.14(a).

(b) To document the compliance status with Condition D.7.~~8~~**9**, the Permittee shall maintain a daily record of visible emission notations of stacks 69, 73, 177, 265, 360, 361, 70, 71, 72, 76, 77, 78, 87, 88, 89, 90, 103, ~~104,~~ 105, 106, 107, 108, 109, 146, 147, 226, 248, 255, 266, 267, 268, 269, 274, 345, 346, 355, **361,** 366, **385, 386, 387, 388, 389, 401, 402,** and 432 controlling the Starch Drying and Handling Operation exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(~~d~~**c**) To document the compliance status with Conditions D.7.~~9~~**10**(a)**,** ~~and~~ D.7.~~9~~**10**(b), **and D.7.10(e)** the Permittee shall maintain a daily record of the scrubber recirculation rates, as read by the continuous monitor, from scrubber 40F26, ~~and~~ scrubber 43F80**, and scrubber 54F460** controlling the Starch Drying and Handling Operation exhaust. The Permittee shall include in its daily record when a scrubber recirculation rate reading is not taken and the reason for the lack of a scrubber recirculation rate reading (e.g. the process did not operate that day).

(~~e~~**d**) To document the compliance status with Conditions D.7.~~9~~**10**(c) and D.7.~~9~~**10**(d), the Permittee shall maintain a daily record of the scrubber recirculation rates from scrubbers 40F3, 16F26, **and** 17F78~~, 16F27, and 17F79~~ controlling the Starch Drying and Handling Operation exhaust. The Permittee shall include in its daily record when a scrubber recirculation rate reading is not taken and the reason for the lack of a scrubber recirculation rate reading (e.g. the process did not operate that day).

(~~f~~**e**) To document the compliance status with Condition D.7.~~10~~**11**, the Permittee shall maintain a daily record of the pressure drop across baghouses 25F2, 40F28, 40F29, 40F88, 41F210, 41F211, 19F402, 30F2, 30F3, 30F15, 46F231, 46F232, ~~and~~ 50F102, **and 52F230** controlling the Starch Handling and Drying Operation exhaust. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(f) In order to document the compliance status with Condition D.7.3(g)(2), the Permittee shall maintain a monthly record of the propylated starch produced on #4 Starch Flash Dryer (54D450).

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

D.7.1~~4~~**5** Reporting Requirements

(a) A quarterly report of the combined propylene oxide input to document the compliance status with Conditions D.7.1(e)(2)**, D.7.3(a)(2), D.7.3(g)(2),** and D.7.~~4~~**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).~~

(b) **A quarterly report of propylated starch production on Roll Dryers #304 and #305 (19D304 and 19D305) and #4 Starch Flash Dryer (54D450), to document the compliance status with conditions D.7.3(a)(2) and D.7.3(g)(2) shall be submitted not later than thirty (30) days after the end of the quarter being reported.**

(c) **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.8 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(h) Starch Packaging and Loadout Operations, consisting of:
***

(25) **One (1) Bag Packer #6 System, approved in 2014 for construction, consisting of the following:**

(A) **One (1) Packer #6 Product Receiver, identified as 56F601, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.**

(B) **One (1) Packer #6 Head Hopper, identified as 56V600, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.**

(C) **One (1) Bag Packer #6, identified as 56Z600, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.**

(D) **One (1) Reprocess Bag Dump Transfer Line, identified as 56C630, with emissions controlled by baghouse 56F601, and exhausting via vent 380 to stack 361.**

(E) **One (1) Packer #6 House Dust Collector, identified as 56F602, controlling emissions from Ultrasonic Sealers and Bag Conveying Systems associated with Packer #6 and Bag Packer Conveying Equipment associated with #2 Starch Agglomerator, and exhausting via vent 381 to stack 361.**

(F) **One (1) Reprocess Bag Dump, identified as 56V630 with emissions controlled by baghouse 56F602, and exhausting via vent 381 to stack 361.**

(2~~5~~**6**) ***

(2~~6~~**7**) ***

(2~~7~~**8**) ***

(2~~8~~**9**) ***

(~~29~~**30**) ***

(3~~0~~**1**) ***

(3~~1~~**2**) ***

(3~~2~~**3**) ***

(3~~3~~**4**) ***

(3~~4~~**5**) ***

(3~~5~~**6**) ***

(3~~6~~**7**) ***

(3~~7~~**8**) ***

(3~~8~~**9**) ***

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

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

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D.8.2 Avoidance Limits for PSD [326 IAC 2-2] [326 IAC 6-3-2]

***

(e) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from each of the emission units 17F01, 17Z01, 17U59, 17U58, 17Z14, 17F14, 20F78, 20F79, 41Z6, 41F44, 16J44, 16F25, 41F8, 41F81, 41F82, 16F100, 41F6, 17F10, 17Z38, 17V04, 17F02, 17V05, 17F15, and 17V06 shall not exceed a calculated pounds per hour limitation when operating at the corresponding process weight rate. Each pound per hour limitation shall be calculated with the following equations:

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

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

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

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

The PSD avoidance limits for PM in Conditions D.8.2(a), D.8.2(c), and D.8.2(d) are more stringent than the 326 IAC 6-3-2 allowable particulate emission rates based on maximum process weight rate for these facilities. Therefore, compliance with these noted PM limits shall satisfy compliance with 326 IAC 6-3-2.

***

D.8.3 Prevention of Significant Deterioration (PSD) Minor Limit PM, PM10, PM2.5 [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable to the 2014 modification, the applicant shall comply with the following:

(a) **The combined PM emission from Packer #6 Product Receiver, identified as 56F601, Packer #6 Head Hopper, identified as 56V600, Packer #6, identified as 56Z600, Reprocess Bag Dump Transfer Line, identified as 56C630 shall not exceed 0.13 lb/hr.**

(b) **The combined PM10 emission from Packer #6 Product Receiver, identified as 56F601, Packer #6 Head Hopper, identified as 56V600, Packer #6, identified as 56Z600, Reprocess Bag Dump Transfer Line, identified as 56C630 shall not exceed 0.13 lb/hr.**

(c) **The combined PM2.5 emission from Packer #6 Product Receiver, identified as 56F601, Packer #6 Head Hopper, identified as 56V600, Packer #6, identified as 56Z600, Reprocess Bag Dump Transfer Line, identified as 56C630 shall not exceed 0.069 lb/hr.**

(d) **The combined PM emissions from Ultrasonic Sealers and Bag Conveying Systems associated with Packer #6, Reprocess Bag Dump, identified as 56V630, and Bag Packer Conveying Equipment associated with #2 Starch Agglomerator, controlled by baghouse 56F602, shall not exceed 0.54 lb/hr.**

(e) **The combined PM10 emissions from Ultrasonic Sealers and Bag Conveying Systems associated with Packer #6, Reprocess Bag Dump, identified as 56V630, and Bag Packer Conveying Equipment associated with #2 Starch Agglomerator, controlled by baghouse 56F602, shall not exceed 0.54 lb/hr.**

(f) **The combined PM2.5 emissions from Ultrasonic Sealers and Bag Conveying Systems associated with Packer #6, Reprocess Bag Dump, identified as 56V630, and Bag Packer Conveying Equipment associated with #2 Starch Agglomerator, controlled by baghouse 56F602, shall not exceed 0.294 lb/hr.**

Compliance with these limits, in combination with the limits in Conditions D.2.2, D.4.1, D.5.2, D.7.3 and D.9.2, shall limit the net emissions increase from the 2014 modification to less than twenty-five (25) tons PM, fifteen (15) tons PM10, ten (10) tons PM2.5, forty (40) tons SO2, forty (40) tons NOx, forty (40) tons VOC, and one-hundred (100) tons CO per twelve consecutive month period, and therefore, render the requirements of 326 IAC 2-2 (PSD) not applicable to the 2014 modification.

D.8.~~3~~**4** Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

The particulate emission rates from emission units 17V6, 16F5, 17F27, 17Z03, 20F1, 20F50, ~~and~~ 20F61, **56F601, 56V600, 56Z600, and 56C630** shall be limited as follows:

(a) The particulate emission rate from baghouse 17F6 shall not exceed 0.12 lb/hr.

(b) The particulate emission rates from baghouses 16F5 and 17F27 shall not exceed 0.13 lb/hr, combined.

(c) The particulate emission rates from baghouse 20F61 shall not exceed 0.17 lb/hr.

(d) The particulate emission rates from baghouses 17F03 and 17F04 shall not exceed 0.20 lb/hr, combined. Note this particulate emission rate limit is more restrictive than the limit provided under Condition D.8.2(b) and represents the PTE of the emission unit after control.

(e) The particulate emission rates from baghouses 20F1 and 20F50 shall not exceed 0.15 lb/hr, each. Note this particulate emission rate limit is more restrictive than the limit provided under Condition D.8.2(a) and represents the PTE of the emission unit after control.

(f) **The particulate emissions rate from baghouse 56F601 shall not exceed 0.13 lb/hr.**

(g) **The particulate emissions rate from baghouse 56F602 shall not exceed 0.54 lb/hr.**

These limits are more stringent than the 326 IAC 6-3-2 allowable particulate emission rates based on maximum process weight rate for these facilities. Therefore, compliance with these limits shall satisfy compliance with 326 IAC 6-3-2.

D.8.~~4~~**5** Particulate Control

(a) In order to comply with Conditions D.8.1, D.8.2, and D.8.~~3~~**4**, baghouses 17F6, 17F58, 16F5, 17F27, 17F10, 17F01, 17F02, 41F18, 41F7, 41F181, 41F182, 41F183, 41F186, 41F44, 17F03, 17F04, 17F15, 16F25, 17F14, 41F8, 41F81, 41F82, 20F1, 20F50, 20F61, 20F60, 20F78, 20F79, 16F100, and 41F6 for particulate control shall be in operation and control particulate emissions from emission units 17V6, 17U58, 17U59, 16F5, 17F27, 17Z38, 17V04, 17Z01, 17F02, 17V05, 41F18, 41Z5, 41F7, 41F181, 41Z3, 41F182, 41Z1, 41F183, 41Z2, 41F186, 41F44, 41Z6, 17Z03, 17F15, 17V06, 16F25, 16J44, 17F14, 17Z14, 41F8, 41F81, 41F82, 20F1, 20F50, 20F61, 20F60, 20F78, 20F79, 16F100, and 41F6 at all times those emission units are in operation.

(b) ***

(c) ***

(d) **In order to comply with Condition D.8.3, baghouses 56F601 and 56F602 for particulate control shall be in operation and control particulate emissions from emission units 56F601, 56V600, 56Z600, 56C630, 56V630, Ultrasonic Sealers and Bag Conveying Systems associated with Packer #6 and Bag Packer Conveying Equipment associated with #2 Starch Agglomerator at all times those emission units are in operation.**

D.8.~~5~~**6** Broken or Failed Bag Detection – Single Compartment Baghouse

***

D.8.~~6~~**7** Testing Requirements ~~[326 IAC 2-7-6(1)]~~ [326 IAC 2-7-5(1)]

(a) In order to demonstrate compliance with Condition D.8.1(b), the Permittee shall perform PM and PM_{10} testing of emission unit 41F186 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 obligations with regard to the performance testing required by this condition.~~ PM_{10} includes filterable and condensable PM.

(b) In order to demonstrate compliance with Conditions D.8.3(a), 8.3(b), and 8.3(c) and with Conditions D.7.3(c), (d), and (e) in Starch Drying and Handling Operations, the Permittee shall perform PM, PM10, and PM2.5 testing on one of the two product receiver bagfilters controlling these emission units utilizing methods approved by the commissioner not later than 180 days after the startup of the Packer #6 Product Receiver, identified as 56F601, Packer #6 Head Hopper, identified as 56V600, Packer #6, identified as 56Z600, Reprocess Bag Dump Transfer Line, identified as 56C630 or not later than 180 days after the startup of the #5 tote packing system with head hopper, identified as 52V245, tote packer, identified as 52Z245, #7 bag packing system with head hopper, identified as 52V247, bag packer, identified as 52Z247, reprocess bag dump, identified as 52V225, blower, identified as 52C224, Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM$_{10}$ and PM$_{2.5}$ includes both filterable and condensable PM.

(c) Not later than 180 days after the startup of the bag packer #6 system, in order to demonstrate compliance with Condition D.8.3(d), D.8.3(e), and D.8.3(f), the Permittee shall perform PM, PM10, and PM2.5 testing the Ultrasonic Sealers and Bag Conveying Systems associated with Packer #6, reprocess Bag Dump, identified as 56V630, and Bag Packer Conveying Equipment associated with #2 Starch Agglomerator, utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM$_{10}$ and PM2.5 includes filterable and condensable PM.

(d) 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 obligations with regard to the performance testing required by this condition.

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

D.8.~~7~~**8** Visible Emissions Notations

(a) Pursuant to 40 CFR 64 (CAM), visible emission notations of the stack 177 exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) Visible emission notations of the stacks' 102, 189, 254, 332, 333, 334, 355, 361, and 404 exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(c) 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.

(d) 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.

(e) 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.

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

D.8.~~8~~**9** Baghouse Parametric Monitoring

(a) Pursuant to 40 CFR 64 (CAM), the Permittee shall record the pressure drop across baghouse 17F10 used in conjunction with emission units 17Z38 and 17V04 at least once per day when the respective emission units are in operation.

(b) The Permittee shall record the pressure drop continuously across baghouse 56F602 used in conjunction with emission units 56 Bldg Conv., 56V630, and 52 Bldg Conv. when the respective emission units are in operation.

(~~b~~**c**) When, for any one reading, the pressure drop across the baghouse is outside of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop of 0.5 and 7.5 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the normal range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(~~c~~**d**) The instruments used for determining the pressure drop shall comply with Section C - Instrument Specifications of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer's specifications, if used.

D.8.~~9~~**1**0 Broken or Failed Bag Detection – Multi-Compartment Baghouse

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

D.8.11 Record Keeping Requirements

(a) To document the compliance status with Condition D.8.~~7~~**8**, the Permittee shall maintain a daily record of visible emission notations of stacks 102, 177, 189, 254, 332, 333, 334, 355, 361, and 404 controlling the Starch Packaging and Loadout Operation exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(b) To document the compliance status with Condition D.8.89, the Permittee shall maintain a daily record of the pressure drop across baghouse 17F10 **and 56F602** controlling the Starch Packaging and Loadout Operation exhaust. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

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

***

~~**SECTION D.9 EMISSIONS UNIT OPERATION CONDITIONS**~~

~~Emissions Unit Description:~~

~~(i) Boiler Support Facilities, consisting of:~~

~~(1) One (1) Coal Storage Silo, identified as 31V3, constructed in 1984, with emissions controlled by bin vent 31F21, and exhausting to stack 203.~~

~~(2) One (1) Coal Day Bin, identified as 31V4, constructed in 1984, with emissions controlled by bin vent 31F19, and exhausting to stack 204.~~

~~(3) One (1) Coal Day Bin, identified as 31V5, constructed in 1984, with emissions controlled by bin vent 31F20, and exhausting to stack 205.~~

~~(4) One (1) GMH Storage Silo, identified as 9V32, loaded pneumatically via Pneumatic Conveyor, identified as 17C19, constructed in 1966, with emissions controlled by bin vent 9F32, and exhausting to stack 119.~~

~~(5) One (1) Boiler Ash Pneumatic Transfer to Ash Silo, identified as 31F10, constructed in 1984, with emissions controlled by baghouse 31F22 with ash steam exhauster 31Z3 and air washer 31Z5, and exhausting to stack 200.~~

~~(6) One (1) Boiler Ash Silo and Truck Loading, identified as 31V1, constructed in 1984, with emissions controlled by bin vent 31F1, and exhausting to stack 199.~~

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

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

~~D.9.1 Prevention of Significant Deterioration [326 IAC 2-2]~~

~~Pursuant to PSD (79) 1557, issued June 21, 1984, and Part 70 Operating Permit No. T157-6009-00003, issued June 28, 2004:~~

~~(a) The PM emissions from the coal/ash handling system facilities (31V1, 31F10, 31V3, 31V4, and 31V5) shall not exceed 0.51 pounds per hour, combined.~~

~~(b) The PM emissions from boiler 31B1 and the coal/ash handling system facilities (31V1, 31F10, 31V3, 31V4, and 31V5) shall not exceed 56 tons per year, combined.~~

~~(c) The particulate matter emissions from the coal/ash handling system facilities (31V1, 31F10, 31V3, 31V4, and 31V5) shall each be controlled by a baghouse providing at least 99.9% collection efficiency.~~

~~Compliance with these requirements will satisfy the requirements of 326 IAC 2-2 (PSD) for emission units 31V1, 31F10, 31V3, 31V4, and 31V5.~~

~~D.9.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]~~

~~The particulate emission rates from emission units 31V3, 31V4, 31V5, 9V32, 31F10, and 31V1 shall be limited as follows:~~

~~(a) The particulate emission rate from bin vent 31F21 shall not exceed 0.10 lb/hr.~~

~~(b) The particulate emission rates from bin vents 31F19 and 31F20 shall not exceed 0.07 lb/hr, each.~~

~~(c) The particulate emission rate from bin vent 9F32 shall not exceed 0.03 lb/hr.~~

~~(d) The particulate emission rate from baghouse 31F22 shall not exceed 0.18 lb/hr.~~

~~(e) The particulate emission rate from bin vent 31F1 shall not exceed 0.09 lb/hr.~~

~~These limits are more stringent than the 326 IAC 6-3-2 allowable particulate emission rates based on maximum process weight rate for these facilities. Therefore, compliance with these limits shall satisfy compliance with 326 IAC 6-3-2.~~

~~D.9.3 Opacity [40 CFR 60, Subpart Y]~~

~~Pursuant to 40 CFR 60.254(a), an owner or operator subject to the provisions of NSPS, Subpart Y shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.~~

~~Compliance Determination Requirements~~

~~D.9.4 Particulate Control~~

~~(a) In order to comply with Conditions D.9.1 and D.9.2, baghouse 31F22 for particulate control shall be in operation and control particulate emissions from emission unit 31F10 at all times emission unit 31F10 is in operation.~~

~~(b) In order to comply with Conditions D.9.1 and D.9.2, bin vents 31F21, 31F19, 31F20, 9F32, and 31F1 for particulate control shall be in operation and control particulate emissions from emission units 31V3, 31V4, 31V5, 9V32, and 31V1 at all times those emission units are in operation.~~

~~D.9.5 Broken or Failed Bag Detection – Single Compartment Baghouse~~

~~(a) For a single compartment baghouse controlling emissions from a process operated continuously, the feed to the 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), or~~

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

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

~~D.9.6 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 60.254(a)]~~

~~In order to demonstrate compliance with Condition D.9.3, not later than 180 days after the issuance of this permit, T157-27029-00003, the Permittee shall perform opacity testing on the coal processing and conveying equipment, coal storage system, and coal transfer and loading system processing coal 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 obligations with regard to the performance testing required by this condition.~~

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

~~D.9.7 Visible Emissions Notations~~

~~(a) Visible emission notations of the stacks' 119, 199, 200, 201, 203, 204, and 205 exhausts shall be performed once per day during normal daylight operations when the respective facilities are in operation. 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. 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.9.8 Broken or Failed Bag Detection – Multi-Compartment Baghouse~~

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

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

~~D.9.9 Record Keeping Requirements~~

~~(a) To document the compliance status with Condition D.9.7, the Permittee shall maintain a daily record of visible emission notations of stacks' 119, 199, 200, 201, 203, 204, and 205 controlling the Boiler Support Facilities exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).~~

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

SECTION D.~~10~~9 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(~~j~~**i**) Utility Area, consisting of:

(1) Three (3) natural gas-fired boilers, identified as 11B1, 11B2 and 11B3, constructed in 1966, each with a heat input capacity of 125 MMBtu/hr, with emissions uncontrolled, and exhausting to stack 197.

(2) One (1) ~~coal-fired boiler~~ NG-fired boiler, identified as 31B1, constructed in 1984 and modified in 2004 **and approved in 2014 for modification**, with a heat input capacity of 231 MMBtu/hr, equipped with **four (4)** low-NO_x burners, ~~using natural gas or coal and starch mixture as supplement fuels~~, ~~with emissions controlled by baghouse 31F2,~~ and exhausting to stack 202.

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

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

D.~~10~~**9**.1 Prevention of Significant Deterioration: Best Available Control Technology [326 IAC 2-2-3]

Pursuant to PSD (79) 1557, issued June 21, 1984, and Part 70 Operating Permit No. T157-6009-00003, issued June 28, 2004:

(a) The controlled particulate matter (PM) emissions from boiler 31B1 shall not exceed 0.05 pounds per MMBtu heat input.

(b) The PM emissions from boiler 31B1 ~~and the coal/ash handling system emission units (31V1, 31F10, 31V3, 31V4, and 31V5)~~ shall not exceed 56 tons per year, combined.

(c) The sulfur dioxide (SO_2) emissions from boiler 31B1 shall not exceed 1.2 pounds per MMBtu heat input and 1,215 tons per 12 month consecutive period~~ with compliance determined at the end of each month by burning low sulfur coal~~.

(d) The nitrogen oxides (NO_x) emissions from boiler 31B1 shall not exceed 0.7 pounds per MMBtu and 782 tons per 12 month consecutive period~~ with compliance determined at the end of each month by boiler feed method and combustion techniques~~.

(e) The carbon monoxide (CO) emissions from boiler 31B1 shall not exceed 10.2 pounds per hour and 45 tons per 12 month consecutive~~ period with compliance determined at the end of each month~~.

(f) The volatile organic compounds (VOC) emissions from boiler 31B1 shall not exceed 1.1 pounds per hour and 5 tons per 12 month consecutive period~~ with compliance determined at the end of each month~~.

(g) Only one of the identical gas-fired boilers (11B1, 11B2, or 11B3) will be operated when ~~the coal-fired boiler, ~~31B1~~,~~ is operating. The only exception is the period of time required to replace the operation of boiler 31B1 with the operation of the two remaining standby gas/oil boilers. In no case will this period of time exceed eight (8) hours.

~~(h) In order to ensure compliance with (a) through (f) above, the total amount of coal consumed by boiler 31B1 and the average coal heating value shall be determined on a monthly basis with compliance determined, per twelve consecutive month period, at the end of each month.~~

Compliance with these requirements will satisfy the requirements of 326 IAC 2-2 (PSD) for Boilers 11B1, 11B2, 11B3, and 31B1.

D.9.2 Prevention of Significant Deterioration (PSD) Minor Limit NOX, CO [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable to the 2014 modification, the applicant shall comply with the following:

(a) The NOx emissions form NG-fired boiler, identified as 31B1, shall not exceed 0.1 lb/MMBtu.

(b) The CO emissions form NG-fired boiler, identified as 31B1, shall not exceed 0.07 lb/MMBtu.

Compliance with these limits, in combination with the limits in Conditions D.4.1, D.5.2, D.7.3, D.8.3 and D.9.2, shall limit the net emissions increase from the 2014 modification to less than twenty-five (25) tons PM, fifteen (15) tons PM_{10}, ten (10) tons $PM_{2.5}$, forty (40) tons SO_2, forty (40) tons NO_X, forty (40) tons VOC, and one-hundred (100) tons CO per twelve

consecutive month period, and therefore, render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2014 modification.

D.~~10.2~~**9.3** Particulate Matter (Sources of Indirect Heating) [326 IAC 6-2-3(d)]

Pursuant to 326 IAC 6-2-3(d) (Particulate Emission Limitation For Sources of Indirect Heating), the particulate matter emissions from boilers 11B1, 11B2, and 11B3, constructed in 1966, shall not exceed 0.8 pounds per MMBtu heat input, each.

D.~~10.3~~**9.4** Particulate Matter (Sources of Indirect Heating) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitation For Sources of Indirect Heating), the particulate matter emissions from boiler 31B1, constructed in 1985, **modified in 2004 and approved in 2014 for modification,** shall not exceed 0.20 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = 1.09 / Q^{0.26}$$

Where:
Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input.
Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input. The maximum operating capacity is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used (Q = 666 MMBtu/hr).

~~D.10.4 Sulfur Dioxide [326 IAC 7-1.1-2] [326 IAC 7-2-1]~~

~~Pursuant to 326 IAC 7-1.1-2(a)(1) (Sulfur Dioxide Emission Limitations), the sulfur dioxide emissions from boiler 31B1 shall not exceed 6.0 pounds per MMBtu heat input when combusting coal. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average. 326 IAC 7-1.1 and 326 IAC 7-2-1 are not federally enforceable. Compliance with Condition D.10.1(c) will ensure compliance with 326 IAC 7-1.1.~~

~~D.10.5 Opacity~~

~~The opacity from boiler 31B1 shall not exceed twenty percent (20%) for any three (3) consecutive six-minute average period.~~

Compliance Determination Requirements

~~D.10.6 Particulate Control~~

~~In order to comply with Conditions D.10.1 and D.10.3, baghouse 31F2 for particulate control shall be in operation and control particulate emissions from facility 31B1 at all times facility 31B1 is in operation.~~

~~D.10.7 Broken or Failed Bag Detection – Single Compartment Baghouse~~

~~(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), or~~

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

~~Bag failure can be indicated by a significant drop in the baghouse's pressure reading with~~

~~abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, or leaks, or dust traces.~~

D.~~10.8~~**9.5** Testing Requirements ~~[326 IAC 2-7-6(1), (6)]~~ [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.9.1(a) and D.9.1(b) and until the completion of the conversion to using of natural gas exclusively, the Permittee shall perform PM testing of emission unit 31B1 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 obligations with regard to the performance testing required by this condition.~~

(b) In order to demonstrate compliance with Condition D.9.2(a), not later than 180 days after the startup of the NG-fired boiler, identified as 31B1, the Permittee shall perform NOx testing, utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

(c) In order to demonstrate compliance with Condition D.9.2(b), not later than 180 days after the startup of the NG-fired boiler, identified as 31B1, the Permittee shall perform CO testing, utilizing methods approved by the commissioner. Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

(d) 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 obligations with regard to the performance testing required by this condition.

~~D.10.9 Sulfur Dioxide (SO_2) Emissions Monitoring [326 IAC 3-5] [326 IAC 7-2-1(g)]~~

~~Pursuant to Agreed Order A-2439, A-3122, A-3147, and A-3186, the Permittee shall maintain, calibrate, and operate a continuous emission monitoring system (CEMS) for sulfur dioxide from boiler 31B1. This system shall be certified in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3. A standard operating procedure detailing quality assurance/quality control activities shall be submitted to the department for approval in accordance with 326 IAC 3-5-4. Relative accuracy tests and routine quarterly audits shall be performed in accordance with the contents of the standard operating procedures (SOP) pursuant to 326 IAC 3-5-5. The continuous emission monitor (CEM) results shall be used to determine compliance with the sulfur dioxide emissions limit on the basis of three-hour block periods. The continuous emission monitoring data shall be used to determine compliance with the sulfur dioxide emission limitations in Conditions D.10.1 and D.10.4 on the basis of three (3) hour block periods.~~

~~D.10.10 Nitrogen Oxides (NO_x) Emissions Monitoring [326 IAC 3-5] [326 IAC 3-5-1(d)]~~

~~The Permittee shall maintain, calibrate, and operate a continuous emission monitoring system (CEMS) for nitrogen oxides from boiler 31B1. This system shall be certified in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3. A standard operating procedure detailing quality assurance/quality control activities shall be submitted to the department for approval in accordance with 326 IAC 3-5-4. Relative accuracy tests and routine quarterly audits shall be performed in accordance with the contents of the standard operating procedures (SOP) pursuant to 326 IAC 3-5-5. The continuous emission monitor (CEM) results shall be used to determine compliance with the nitrogen oxides emissions limit on the basis of a 30-day rolling average emission rate calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding thirty (30) steam generating unit operating days. The continuous emission monitoring data shall be used to determine compliance with the nitrogen oxide emission limitations in Conditions D.10.1 on the basis of a 30-day rolling average emission rate calculated each steam generating unit operating day as the average of all of the~~

~~hourly nitrogen oxides emission data for the preceding thirty (30) steam generating unit operating days.~~

~~D.10.11 Continuous Opacity Monitoring [326 IAC 3-5]~~

~~Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions) and 326 IAC 2, the Permittee shall maintain, calibrate, and operate a continuous monitoring system to measure the opacity of the exhaust from boiler 31B1. The continuous opacity monitoring system shall meet the performance specifications of 326 IAC 3-5-2.~~

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

~~D.10.12 Opacity Readings [40 CFR 64]~~

~~Compliance with the applicable opacity limitation in Condition D.10.5 shall be monitored by continuously measuring and recording the opacity of emissions from the stack exhaust. The opacity shall be determined by the certified continuous opacity monitor required in Condition D.10.11. If abnormal emissions are observed, the Permittee shall take reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.~~

~~D.10.13 Maintenance of Continuous Opacity Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]~~

~~(a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous opacity monitoring systems (COMS) and related equipment. For a boiler, the COMS shall be in operation at all times that the induced draft fan is in operation.~~

~~(b) All COMS shall meet the performance specifications of 40 CFR 60, Appendix B, Performance Specification No. 1, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5.~~

~~(c) In the event that a breakdown of a COMS occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.~~

~~(d) Whenever a COMS is malfunctioning or will be down for maintenance, or repairs for a period of twenty-four (24) hours or more, a backup COMS is not online within twenty-four (24) hours of shutdown of the primary COMS, the Permittee shall provide a certified opacity reader, who may be an employee of the Permittee or an independent contractor, to self-monitor the emissions from the emission unit stack.~~

~~(1) Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.~~

~~(2) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least twice per day during daylight operations, with at least four (4) hours between each set of readings, until a COMS is online.~~

~~(3) Method 9 readings may be discontinued once a COMS is online.~~

~~(4) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.~~

~~(e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5.~~

~~D.10.14 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 in accordance with applicable federal regulations and 326 IAC 3-5.~~

~~(b) The CEMS shall be operated at all times, except during CEMS malfunctions, reasonable periods of necessary CEMS calibration, or CEMS maintenance activities. CEMS calibration and maintenance activities shall be properly documented and shall be conducted pursuant to the standard operating procedures under 326 IAC 3-5-4(a).~~

~~(c) The Permittee shall keep records in accordance with 326 IAC 3-5-6(b) that includes the following:~~

~~(1) All documentation relating to:~~

~~(A) Design, installation, and testing of all elements of the monitoring system, and~~

~~(B) Required corrective action or compliance plan activities.~~

~~(2) All maintenance logs, calibration checks, and other required quality assurance activities,~~

~~(3) All records of corrective and preventive action,~~

~~(4) A log of plant operations, including the following:~~

~~(A) Date of facility downtime,~~

~~(B) Time of commencement and completion of each downtime, and~~

~~(C) Reason for each downtime.~~

~~(d) In accordance with 326 IAC 3-5-7(5), the Permittee shall submit reports of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately. The reports shall include the following:~~

~~(1) Date of downtime,~~

~~(2) Time of commencement,~~

~~(3) Duration of each downtime,~~

~~(4) Reasons for each downtime, and~~

~~(5) Nature of system repairs and adjustments.~~

~~(e) Except where permit conditions streamline similar applicable requirements pursuant to 326 IAC 2-7-24, nothing in this permit shall excuse the Permittee from complying with 326 IAC 3-5.~~

~~D.10.15 SO_2 Monitor Downtime [326 IAC 2-7-6] [326 IAC 2-7-5(1)]~~

~~Whenever the SO_2 CEMS is down for more than twenty-four (24) hours, a calibrated backup CEMS shall be brought online within twenty-four (24) hours of shutdown of the primary CEMS, if possible. If this is not possible, a fuel analysis, pursuant to 326 IAC 3-7-2(a) or (b), shall be conducted to allow for determination of compliance with all SO_2 emission limits.~~

~~D.10.1 Broken or Failed Bag Detection – Multi-Compartment Baghouse~~

~~In the event that bag failure is observed in a multi-compartment baghouse, if operations will~~

~~continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.~~

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

~~D.10.1 Record Keeping Requirements~~

~~(a) To document the compliance status with Condition D.10.1, the Permittee shall maintain monthly records of the heating value and amount of coal consumed by boiler 31B1.~~

~~(b) To document the compliance status with Condition D.10.9 and D.10.10, the Permittee shall maintain records of the continuous emission monitoring data for SO_2 and NO_x in accordance with 326 IAC 3-5.~~

~~(c) To document the compliance status with Condition D.10.12, the Permittee shall maintain records of the continuous opacity monitoring data in accordance with 326 IAC 3-5. Records shall be complete and sufficient to establish compliance with the limits established in this section.~~

~~(d) To document the compliance status with Condition D.10.13, when the COMS is not functioning, the Permittee shall maintain records of visible emissions notations of the stack exhaust.~~

~~(e) To document the compliance status with Conditions D.10.14 and D.10.15, when the CEMS is not functioning, the Permittee shall maintain records of instrument downtime and fuel analysis.~~

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

~~D.10.1 Reporting Requirements~~

~~(a) The natural gas fired boiler certification shall be submitted not later than thirty (30) days after the end of the six (6) month period 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 certification, signed by the responsible official, shall be submitted that certifies all of the fuels combusted during the twelve month period.~~

~~(c) A quarterly report of the boiler 31B1 emissions and coal consumption to document the compliance status with Condition D.10.1 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).~~

~~(d) A monitoring report for boiler 31B1 excess emissions and continuous emission monitor downtime shall be submitted not later than thirty (30) days after the end of the quarter being reported. The report shall include all coal boiler 31B1 continuous monitors required to be operated under 326 IAC 3-5 and shall be prepared in accordance with IAC 3-5-7. 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.~~11~~**10** EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(~~k~~**j**) One (1) Wastewater Treatment Anaerobic Digester, identified as 34V10, constructed in 1985. Biogas emissions can be:

(1) Controlled by the use of an alkaline scrubber, identified as 34V11, for controlling H_2S emissions; and

(A) Used as fuel in fiber flash dryer furnace 21B501; and/or

(B) Used as fuel in gluten flash dryer 48D101; and/or

(C) Combusted in one (1) main flare (21Z1), exhausting to stack 271, if the biogas produced exceeds these emissions units' capacity;

or

(2) Combusted in one (1) emergency flare (34Z1), exhausting to stack 272.

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

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

D.1~~1~~**0**.1 Prevention of Significant Deterioration [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3, the SO_2 BACT for emission unit 34V10 shall be the use of alkaline scrubber 34V11; and

(a) The scrubber shall have a minimum H_2S control efficiency of 90%, and shall not exceed 9 lbs/hr SO_2 (equivalent to 4.78 lbs/hr of H_2S) in the scrubber outlet, when the inlet H_2S concentration to the scrubber is more than 1.1% by volume.

(b) The scrubber shall have an outlet H_2S concentration of less than 0.11% by volume, and shall not exceed 9 lbs/hr SO_2 (equivalent to 4.78 lbs/hr H_2S) in the scrubber outlet if the inlet concentration of H_2S is 1.1% by volume or less.

(c) To determine compliance with Condition D.1~~1~~**0**.1(a) and (b), the hydrogen sulfide content of the untreated biogas, the hydrogen sulfide content of the biogas treated by the biogas scrubber (34V11), the temperature of the biogas at the time of testing, and the total amount of biogas treated by the scrubber (34V11) shall be measured on a daily basis and used to calculate an average hourly sulfur dioxide emission rate and scrubber removal efficiency. If the biogas is directed to the emergency flare (34Z1), the hydrogen sulfide content of the untreated biogas, the temperature of the untreated biogas at the time of testing, and the total amount of untreated biogas burned by the emergency flare (34Z1) shall be measured on a daily basis and used to calculate a daily sulfur dioxide emission rate.

(d) The Permittee shall notify the IDEM, OAQ within two working days of any period if any H_2S is emitted directly to the atmosphere without being burned.

Compliance Determination Requirements

D.1~~1~~**0**.2 Hydrogen Sulfide (H2S)

In order to comply with Condition D.1~~1~~**0**.1:

(a) Scrubber 34V11 for H_2S control shall be in operation and control emissions from emission unit 34V10 at all times when emission unit 34V10 is producing biogas and the biogas is used as fuel in fiber flash dryer furnace 21B501 and gluten flash dryer 48D101.

(b) Main flare 21Z1 for H_2S control shall be in operation and control emissions from scrubber 34V11 at all times when biogas is routed to scrubber 34V11 and is not used as fuel in fiber flash dryer furnace 21B501 and/or gluten flash dryer 48D101.

(c) Emergency flare 34Z1 for H_2S control shall be in operation and combust the biogas at all times when biogas is vented to it, and:

(1) The amount of biogas produced by emission unit 34V10 exceeds the capacities of fiber flash dryer furnace 21B501, gluten flash dryer 48D101, and main flare 21Z1, or

(2) Inspection or maintenance of scrubber 34V11 or blowers occurs that requires biogas from emission unit 34V10 be isolated to allow that maintenance to be performed safely.

D.1~~1~~**0**.3 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.1~~1~~**0**.1, the Permittee shall perform H_2S testing on the inlet and outlet of scrubber 34V11 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 obligations with regard to the performance testing required by this condition. All hydrogen sulfide measured will be assumed to have been converted to sulfur dioxide in flares 21Z1 and 34Z1, fiber flash dryer furnace 21B501, and gluten flash dryer 48D101.

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

D.1~~1~~**0**.4 Flare Pilot Flame

The presence of a flare pilot flame (for flares 21Z1 and 34Z1) shall be monitored using a thermocouple, or any other equivalent device, to detect the presence of a flame.

D.1~~1~~**0**.5 Scrubber Parametric Monitoring [40 CFR 64]

(a) The Permittee shall monitor and record the pH across scrubber 34V11 at least once per day when digester 34V10 is in operation.

(1) When, for any one reading, the pH across the scrubber is outside ~~of~~ the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pH between 9 and 11.5 unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. A pressure reading that is outside the above mentioned range is not a deviation from this permit.

(2) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A pH reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) The Permittee shall monitor and record the recirculation rate from scrubber 34V11 continuously when emission unit 34V10 is in operation.

(1) From the date of startup until the stack test results are available, the Permittee shall maintain the flow rate at or above the minimum of 70 gallons per minute. If the flow rate falls below 70 gallons per minute, the Permittee shall take a reasonable response.

(2) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with the limits in Condition D.1~~1~~**0**.1.

(3) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate as observed during the latest compliant stack test. If the flow rate falls below the level observed during the latest compliant stack test, the Permittee shall take a reasonable response.

(4) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. A flow rate 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.

(c) The instruments used for determining the 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 or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer's specifications, if used.

D.1~~1~~**0**.6 Scrubber Failure Detection

In the event that scrubber failure for emission unit 34V10 has been observed:

The biogas shall be routed to the emergency flare (34Z1) 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).

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

D.1~~1~~**0**.7 Record Keeping Requirements

(a) To document the compliance status with Condition D.1~~1~~**0**.1, the Permittee shall maintain:

(1) A log of the daily H_2S content before and after scrubber 34V11, temperature, and the total amount of the biogas burned in main flare 21Z1, fiber flash dryer furnace 21B501, gluten flash dryer 48D101, and emergency flare 34Z1.

(2) Records of all calculations used to determine the SO_2 emissions from the combustion of biogas in main flare 21Z1, fiber flash dryer furnace 21B501, gluten flash dryer 48D101, and emergency flare 34Z1.

(b) To document the compliance status with Condition D.1~~1~~**0**.5, the Permittee shall maintain a daily record of the pH and scrubber recirculation rate from scrubber 34V11 controlling the Wastewater Treatment Anaerobic Digester exhaust. The Permittee shall include in its daily record when a pH or scrubber recirculation rate reading is not taken and the reason for the lack of a pH or scrubber recirculation rate reading (e.g. the process did not operate that day).

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

SECTION D.1~~2~~**1** EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities

(e) Gasoline fuel transfer dispensing operations handling less than or equal to 1,300 gallons per day and filling storage tanks having a capacity equal to or less than 10,500 gallons:

One (1) storage tank, identified as Tank #3, for storage of gasoline, located east of the Bag Storage Building, with a maximum volume of 1,000 gallons. [326 IAC 8-4-6] [326 IAC 8-4-9]

(j) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2] ~~[326 IAC 8-3-5]~~

(l) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-3-2]

(n) Structural steel and bridge fabrication activities using 80 tons or less of welding consumables. [326 IAC 6-3-2]

~~(w) Coal bunker and coal scale exhausts and associated dust collector vents. [326 IAC 6-3-2]~~

~~(ff) Vents from ash transport systems not operated at positive pressure. [326 IAC 6-3-2]~~

~~(kk) Activities with potential emissions within any of the following thresholds: equal to or less than 5 pounds per hour or 25 pounds per day PM_{10}, SO_2, or NO_x; equal to or less than 3 pounds per hour or 15 pounds per day VOC; equal to or less than 25 pounds per day CO; equal to or less than 0.6 tons per year or 3.29 pounds per day Pb; or greater than 1 pound per day but less than 5 pounds per day or 1 ton per year single HAP (and not regulated by a NESHAP):~~

~~Building 41 --- Roll Dryers:~~
~~41 Building House Vacuum System, identified as 41F133. [326 IAC 6-3-2]~~

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

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

D.1~~2~~**1**.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the particulate emissions from the brazing equipment, cutting torches, soldering equipment, welding equipment, structural steel and bridge fabrication activities, ~~coal bunker and coal scale exhausts and associated dust collector vents, vents from ash transport systems not operated at positive pressure, and the 41 Building House Vacuum System (41F133)~~ shall not exceed a pound per hour emission rate established as E in the following formulas:

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

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

or

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

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

D.1~~2~~**1**.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

~~Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations) for cold cleaning operations constructed after January 1, 1980, the Permittee shall:~~

~~(a) Equip the cleaner with a cover;~~

~~(b) Equip the cleaner with a facility for draining cleaned parts;~~

~~(c) Close the degreaser cover whenever parts are not being handled in the cleaner;~~

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

~~(e) Provide a permanent, conspicuous label summarizing the operation requirements; and~~

~~(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.~~

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

(1) Equip the degreaser with a cover.

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

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

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

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

(6) Store waste solvent only in closed containers.

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

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

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

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
(B) A water cover when solvent used is insoluble in, and heavier than, water.
(C) A refrigerated chiller.

(D) Carbon adsorption.

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

(2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.

(3) If used, solvent spray:

(A) must be a solid, fluid stream; and

(B) shall be applied at a pressure that does not cause excessive splashing.

D.11.3 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers), on and after January 1, 2015, the Permittee shall not operate a cold cleaning degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

~~D.12.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]~~

~~(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the Permittee of a cold cleaner degreaser facility, construction of which commenced after July 1, 1990, shall ensure that the following control equipment requirements are met:~~

~~(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:~~

~~(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));~~

~~(B) The solvent is agitated; or~~

~~(C) The solvent is heated.~~

~~(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system;~~

~~(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b);~~

~~(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing; and~~

~~(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):~~

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

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

~~(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.~~

~~(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the Permittee of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:~~

~~(1) Close the cover whenever articles are not being handled in the degreaser;~~

~~(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases; and~~

~~(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.~~

D.1~~2~~**1**.4 Avoidance Limit for VOC [326 IAC 8-4-6] [326 IAC 8-4-9]

In order to render the requirements of 326 IAC 8-4-6 and 326 IAC 8-4-9 not applicable to the storage tank identified as Tank #3, the monthly gasoline throughput from Tank #3 shall not exceed 10,000 gallons per month. Compliance with the above limit will render the requirements of 326 IAC 8-4-6 and 326 IAC 8-4-9 not applicable to Tank #3.

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

D.1~~2~~**1**.5 Record Keeping Requirements

(a) To document the compliance status with Condition D.1~~2~~**1**.~~4~~**3**, the Permittee shall maintain monthly records of gasoline throughput from the storage tank identified as Tank #3.

(b) To document the compliance status with Condition D.11.3, on and after January 1, 2015, the Permittee shall maintain the following records for each purchase of solvent used in the cold cleaner degreasing operations. These records shall be retained on-site or accessible electronically for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.

(1) The name and address of the solvent supplier.

(2) The date of purchase.

(3) The type of solvent purchased.

(4) The total volume of the solvent purchased.

(5) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

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

SECTION E.2 FACILITY OPERATION CONDITIONS

Reserved

~~Facility Description [326 IAC 2-7-5(15)]:~~

~~(i) Boiler Support Facilities, consisting of:~~

~~(1) One (1) Coal Storage Silo, identified as 31V3, constructed in 1984, with emissions controlled by bin vent 31F21, and exhausting to stack 203. Under 40 CFR 60, Subpart Y, this is considered an affected facility. [40 CFR 60, Subpart Y]~~

~~(2) One (1) Coal Day Bin, identified as 31V4, constructed in 1984, with emissions controlled by bin vent 31F19, and exhausting to stack 204. Under 40 CFR 60, Subpart Y, this is considered an affected facility. [40 CFR 60, Subpart Y]~~

~~(3) One (1) Coal Day Bin, identified as 31V5, constructed in 1984, with emissions controlled by bin vent 31F20, and exhausting to stack 205. Under 40 CFR 60, Subpart Y, this is considered an affected facility. [40 CFR 60, Subpart Y]~~

~~Insignificant Activities~~

~~(ii) Facilities in coal preparation plants, including:~~

~~(1) One (1) Coal Truck Dump Hopper, identified as 31V2, constructed in 1984, with emissions uncontrolled.~~

~~(2) One (1) Coal Bucket Elevator, identified as 31U3, constructed in 2009, permitted in 2011, with emissions uncontrolled, and exhausting to Conveyor 31U5.~~

~~(3) One (1) Coal Bucket Elevator, identified as 31U4, constructed in 2008, permitted in 2011, with emissions uncontrolled, and exhausting to Conveyor 31U5.~~

~~(4) One (1) Coal Feed Conveyor, identified as 31U5, constructed in 1984, with emissions uncontrolled, and exhausting to Silo 31V3 and Bins 31V4 and 31V5.~~

~~(5) One (1) Coal Pulverizer, identified as 31G3, with starch loaded pneumatically via Pneumatic Conveyor, identified as 09C35, constructed in 1984, with emissions exhausting to Boiler 31B1.~~

~~(6) One (1) Coal Pulverizer, identified as 31G4, with starch loaded pneumatically via Pneumatic Conveyor, identified as 09C35, constructed in 1984, with emissions exhausting to Boiler 31B1.~~

~~Under 40 CFR 60, Subpart Y, these are considered existing affected sources. [40 CFR 60, Subpart Y]~~

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

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

~~(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 for the coal preparation facilities except as otherwise specified in 40 CFR Part 60, Subpart Y.~~

~~(b) Pursuant to 40 CFR 60.19, the Permittee shall submit all required notifications and reports to:~~

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

~~E.2.2 New Source Performance Standards for Coal Preparation Plants [40 CFR Part 60, Subpart Y]~~

~~The Permittee which engages in coal preparation shall comply with the following provisions of 40 CFR Part 60, Subpart Y, which are incorporated by reference as 326 IAC 12 (included as Attachment B of this permit):~~

~~(a) 40 CFR 60.250;~~
~~(b) 40 CFR 60.251;~~
~~(c) 40 CFR 60.252(c); and~~
~~(d) 40 CFR 60.254(a), (b)(2).~~

SECTION E.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(1**4**~~5~~)]:

Insignificant Activities

(jj) Propylene oxide storage tank and associated distribution system, including

(1) One (1) Propylene Oxide (PO) Tank, identified as 42V1, constructed in 1986, with a capacity of 30,000 gallons.

(2) Distribution system that includes railcar transfer rack, all valves, pumps, and sampling connections associated with the PO distribution system.

Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source.
[40 CFR 63, Subpart EEEE]

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

SECTION E.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(1**4**~~5~~)]:

Insignificant Activities

(cc) Emergency generators as follows:

(1) One (1) emergency diesel generator, installed in 1998, identified as Wastewater Treatment Generator, with a maximum capacity of 317 hp. Under 40 CFR 63, Subpart ZZZZ, this is considered an existing affected source. [40 CFR 63, Subpart ZZZZ]

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

SECTION E.5 NESHAP

Emissions Unit Description:

(1) Three (3) natural gas-fired boilers, identified as 11B1, 11B2 and 11B3, constructed in 1966, each with a heat input capacity of 125 MMBtu/hr, with emissions uncontrolled, and exhausting to stack 197.

(2) One (1) NG-fired boiler, identified as 31B1, constructed in 1984 and modified in 2004 and approved in 2014 for modification, with a heat input capacity of 231 MMBtu/hr, equipped with four (4) low-NO_x burners, and exhausting to stack 202.

(3) One (1) natural gas or biogas fired Fiber Flash Dryer Furnace, identified as 21B501, constructed in 2007, with a heat input capacity of 60 MMBtu/hr, with emissions uncontrolled, and exhausting to stack 17. This emissions unit is part of Fiber Flash Dryer 21D501 for the purposes of NSPS, 40 CFR 60, Subpart Dc. Under 40 CFR 60, Subpart Dc, this is considered an affected source. [40 CFR 60, Subpart Dc]

(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. 5.1 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 63.7565, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, for the above listed emissions units, as specified in 40 CFR Part 63, Subpart DDDDD, in accordance with the schedule 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 Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204**

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.5.2 Industrial, Commercial and Institutional Boilers and Process Heaters NESHAP [40 CFR Part 63, Subpart DDDDD] [326 IAC 20-95]

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

(1) 40 CFR 63.7485
(2) 40 CFR 63.7500(a)(1)
(3) 40 CFR 63.7505(a)
(4) 40 CFR 63.7510(a)(2)(ii) & (e)
(5) 40 CFR 63.7515(d)
(6) 40 CFR 63.7521(f)(g)

(7) 40 CFR 63.7530(g)
(8) 40 CFR 63.7540(a)(10)
(9) 40 CFR 63.7540(a)(19)(vii)(c)
(10) 40 CFR 63.7545(b)(c)(e)(h)
(11) 40 CFR 63.7555(g)
(12) 40 CFR 63.7575

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

Part 70 Quarterly Report

Source Name: Tate & Lyle Ingredients Americas LLC
Source Address: 2245 North Sagamore Parkway, Lafayette, IN 47904
Part 70 Permit No.: T157-27029-00003
Facility: Starch Modification Operations 45V223, 45V240, 45V241, 45V242, 45V243, 45V246, 45V247, 45V248, 45V270, 45V271, 45V280, 45V281, 45V292, 45V293, 45V294, 45V295, 45V296, 40Y1, 40V1, 40V50, 40U2, 40V20, 40V21, 40F51, 40F52, 40F53, 40F54, 40V15, 40V16, 40U23, 43V71, 43V72, 43F71, 43F72, 43F73, 43V85, 43V86, 30V1, 30V2, 40V11, 40V12, 40V14, 46V297, 46V201, 46V213, 46V204, 45V117, 45V118, 45V119, 45V120; and Starch Drying and Handling Operations 40D1, 40D20, 43D71, 41D1, 41D2, 41D3, 41D4, 41D5, 41D6, 41D7, 41D8, 30D1, 16D4~~, 16D5~~, 46D200, 19D301, 19D302, and 19D303

Parameter: Propylene oxide (PO) input for propylated starch reactions that do not undergo the acid-kill step

Limit: Fifteen hundred (1,500) tons propylene oxide per twelve consecutive month period with compliance determined at the end of each month.

YEAR: ______________

Month	VOC Usage This Month	VOC Usage Previous 11 Months	VOC Usage 12 Month Total

☐ No deviation occurred in this month.

☐ Deviation/s occurred in this month.
Deviation has been reported on: _____________

Submitted by: ________________________________

Title/Position: ________________________________

Signature: ________________________________

Date: ______________________________

Phone: ______________________________

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

Part 70 Quarterly Report

Source Name: **Tate & Lyle Ingredients Americas LLC**
Source Address: **2245 North Sagamore Parkway, Lafayette, IN 47904**
Part 70 Permit No.: **T157-27029-00003**
Facility: **#4 Starch Flash Dryer**
Parameter: **Propylated Starch Production**
Limit: **Two hundred and fifty (250) million pounds of propylated starch per twelve consecutive month period with compliance determined at the end of each month.**

YEAR: ______________

Month	Propylated Starch Produced This Month	Propylated Starch Produced Previous 11 Months	Propylated Starch Produced 12 Month Total

☐ **No deviation occurred in this month.**

☐ **Deviation/s occurred in this month.**
Deviation has been reported on: ___________

Submitted by: ______________________________

Title/Position: ______________________________

Signature: ______________________________

Date: ______________________________

Phone: ______________________________

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

Part 70 Quarterly Report

Source Name: Tate & Lyle Ingredients Americas LLC
Source Address: 2245 North Sagamore Parkway, Lafayette, IN 47904
Part 70 Permit No.: T157-27029-00003
Facility: Propylated Starch Reactors (45V298 and 45V299)
Parameter: Combined throughput
Limit: Sixty (60) million pounds of propylated starch per twelve consecutive month period with compliance determined at the end of each month.

YEAR: ______________

Month	Propylated Starch throughput This Month	Propylated Starch throughput Previous 11 Months	Propylated Starch Throughput 12 Month Total

☐ **No deviation occurred in this month.**

☐ **Deviation/s occurred in this month.**
Deviation has been reported on: ___________

Submitted by: ________________________________

Title/Position: ________________________________

Signature: ________________________________

Date: ________________________________

Phone: ________________________________

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

Part 70 Quarterly Report

Source Name: Tate & Lyle Ingredients Americas LLC
Source Address: 2245 North Sagamore Parkway, Lafayette, IN 47904
Part 70 Permit No.: T157-27029-00003
Facility: Propylated Starch Reactors (45V298 and 45V299)
Parameter: Propylene oxide used in propylated starch reaction that do not undergo the 'acid kill step'
Limit: Four (4) million pounds of propylene oxide per twelve consecutive month period with compliance determined at the end of each month.

YEAR: ______________

Month	Propylene oxide used This Month	Propylene oxide used Previous 11 Months	Propylene oxide used 12 Month Total

☐ **No deviation occurred in this month.**

☐ **Deviation/s occurred in this month.**
Deviation has been reported on: ___________

Submitted by: ________________________________

Title/Position: ________________________________

Signature: ________________________________

Date: ________________________________

Phone: ________________________________

(b) Table of contents was update to reflect revisions to the permit

Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 157-34094-00003 and Significant Permit Modification No 157-34105-00003. The staff recommend to the Commissioner that this Part 70 Significant Source and Significant Permit Modification be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Ghassan Shalabi 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 317-234-5378 or toll free at 1-800-451-6027 extension 4-5378.

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

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Appendix A: Emissions Calculations
Tate & Lyle, Sagamore

Company Name: Tate & Lyle Ingredients Americas LLC
Address City IN Zip: 2245 North Sagamore Parkway, Lafayette, IN 47904
Significant Source Mod No.: 157-34094-00003
Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

Sagamore Wet Milling Yield Improvement and Starch Drying Expansion Project: Calculation Sheet Index

Sheet No.	Tab Title	Description
1	Summary	Overall calculation results summary table - project and net emissions increases
2	Proj Summary	Project emissions increase summary results
3	Net Summary	Contemporaneous emissions increases/decreases summary results
4	Wet Mill New Unit PTE	PTE calculations for new units associated with yield improvement project (wet mill)
5	Starch New Unit PTE	PTE calculations for new units associated with starch expansion project
6	Affected Units ATPA	ATPA calculations for affected existing emissions units
7	ATPA Prod Inputs	Production rate inputs for PAE and EE calculations
8	Yield Proj Material Bal	Yield improvement project material balance used to derive ATPA calculation inputs
9	P.O. Balance BAE	Propylene Oxide modified starch material balance used for determining BAE for VOC
10	P.O. Balance PAE	Propylene Oxide modified starch material balance used for determining PAE and CHAE VOC
11	P.O. Bal New Reactors	Propylene Oxide modified starch material balance used for determining PTE for new reactors
12	Ox Starch Reactor Detail	Calculation detail for proposed new oxidized starch reactor (18V274)
13	Fug Summary	Fugiitve emissions summary
14	Bldg Fugitives	Building fugitive emissions calculations
15	Bldg Analytical	Input data for building fugitives calculations
16	WWTP Fug	Wastewater treatment plant fugitive emissions calculations
17	VMT Calcs	Vehicle miles traveled calculations
18	Paved Road Fug	Paved road fugitive emissions calculations
19	Truck Loading & Receiving Fu	Truck loading and receiving fugitive emissions calculations
20	Coal Blr Calc Summary	Coal boiler conversion calculation summary results
21	Coal Blr Calc Detail	Coal boiler conversion calculation detail
22	Coal Blr Prod & CEMS Data	Coal boiler production and CEMS data (used to determine BAE for coal boiler and associated equipment)
23	Belt Dryer Sys Shutdown	Belt dryer system shutdown emissions calculations

Glossary

acfm actual cubic feet per minute
ATPA Actual-to-projected-actual emissions test
BAE Baseline actual emissions
Btu British thermal unit
Bu Bushel
c.w. Commercial weight
CEMS Continuous emissions monitoring system
cf Cubic foot
cfm cubic feet per minute
CHA Could have accommodated (generally applied to production rate)
CHAE Could have accommodated emissions (emissions that the unit(s) could have accommodated in the selected basline period)
CO Carbon monoxide
CO2 Carbon dioxide
CO2e GHGs expressed as carbon dioxide equivalent emissions

Appendix A: Emissions Calculations
Tate & Lyle, Sagamore

Company Name: Tate & Lyle Ingredients Americas LLC
Address City IN Zip: 2245 North Sagamore Parkway, Lafayette, IN 47904
Significant Source Mod No.: 157-34094-00003
Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

DS	Dry solids
EE	Excludable emissions
F	Fluorides
GHGs	Greenhouse gases
gpm	Gallons per minute
H2SO4	Sulfuric acid mist
kbu	Thousand bushels
mcf	Thousand cubit feet
mmbu	Million bushels
mmcf	Million cubic feet
NOx	Nitrogen oxides
P.O.	Propylene oxide
PAE	Projected actual emissions
Pb	Lead
PM	Particulate matter, filterable only
PM10	Particulate matter ≤ 10 μm, includes condensables
PM2.5	Particulate matter ≤ 2.5 μm, includes condensables
PTE	Potential-to-emit
scfm	standard cubic feet per minute
SO2	Sulfur dioxide
VOC	Volatile organic compounds
WWTP	Wastewater treatment plant

Appendix A: Emissions Calculations
Coal Boiler (31B1) Coal Combustion Emissions
Utility Area

Company Name: Tate & Lyle Ingredients Americas LLC
Address City IN Zip: 2245 North Sagamore Parkway, Lafayette, IN 47904
Significant Source Mod No.: 157-34094-00003
Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

Coal Higher Heating Value (Btu/lb)	11500
Boiler Heat Input (MMBtu/hr) [1]	231
Boiler Coal Usage (tons/hr) [2]	10.043
$PM_{2.5}$:PM_{10} Ratio based on SCC Code for Coal Combustion	0.3485
Hours of Operation (hr/yr)	8760

Pollutant	Emission Factor		Emission Rate	
			lb/hr [3]	tpy [4]
NO_x	0.7	lb/MMBtu [5]	161.70	708.25
CO	10.2	lb/hr [6]	10.20	44.68
PM/PM_{10}	0.05	lb/MMBtu [5]	11.55	50.59
$PM_{2.5}$	0.017	lb/MMBtu [7]	4.03	17.63
SO_2	1.2	lb/MMBtu [5]	277.20	1214.14
VOC	1.1	lb/hr [6]	1.10	4.82
CO_2	6,250	lb/ton coal [8]	16,603	72,722
CH_4	0.04	lb/ton coal [9]	0.11	0.47
N_2O	0.08	lb/ton coal [9]	0.21	0.93
GHGs [10]			16,603	72,723
CO_2e [11]			16,671	73,020
HAPs				
POM				
Biphenyl	1.70E-06	lb/ton coal [12]	1.71E-05	7.48E-05
Acenaphthene	5.10E-07	lb/ton coal [12]	5.12E-06	2.24E-05
Acenaphthylene	2.50E-07	lb/ton coal [12]	2.51E-06	1.10E-05
Anthracene	2.10E-07	lb/ton coal [12]	2.11E-06	9.24E-06
Benzo(a)anthracene	8.00E-08	lb/ton coal [12]	8.03E-07	3.52E-06
Benzo(a)pyrene	3.80E-08	lb/ton coal [12]	3.82E-07	1.67E-06
Benzo(b,j,k)fluoranthene	1.10E-07	lb/ton coal [12]	1.10E-06	4.84E-06
Benzo(h,g,i)perylene	2.70E-08	lb/ton coal [12]	2.71E-07	1.19E-06
Chrysene	1.00E-07	lb/ton coal [12]	1.00E-06	4.40E-06
Fluoranthene	7.10E-07	lb/ton coal [12]	7.13E-06	3.12E-05
Fluorene	9.10E-07	lb/ton coal [12]	9.14E-06	4.00E-05
Indeno(1,2,3-cd)pyrene	6.10E-08	lb/ton coal [12]	6.13E-07	2.68E-06
Naphthalene	1.30E-05	lb/ton coal [12]	1.31E-04	5.72E-04
Phenanathrene	2.70E-06	lb/ton coal [12]	2.71E-05	1.19E-04
Pyrene	3.30E-07	lb/ton coal [12]	3.31E-06	1.45E-05
5-Methyl chrysene	2.20E-08	lb/ton coal [12]	2.21E-07	9.68E-07
TOTAL POM			2.08E-04	9.13E-04
Acetaldehyde	5.70E-04	lb/ton coal [13]	5.72E-03	2.51E-02
Acetophenone	1.50E-05	lb/ton coal [13]	1.51E-04	6.60E-04
Acrolein	2.90E-04	lb/ton coal [13]	2.91E-03	1.28E-02
Benzene	1.30E-03	lb/ton coal [13]	1.31E-02	5.72E-02
Benzyl chloride	7.00E-04	lb/ton coal [13]	7.03E-03	3.08E-02
Bis(2-ethylhexyl)phthalate	7.30E-05	lb/ton coal [13]	7.33E-04	3.21E-03
Bromoform	3.90E-05	lb/ton coal [13]	3.92E-04	1.72E-03
Carbon sulfide	1.30E-04	lb/ton coal [13]	1.31E-03	5.72E-03
2-Chloroacetophenone	7.00E-06	lb/ton coal [13]	7.03E-05	3.08E-04
Chlorobenzene	2.20E-05	lb/ton coal [13]	2.21E-04	9.68E-04
Chloroform	5.90E-05	lb/ton coal [13]	5.93E-04	2.60E-03
Cumene	5.30E-06	lb/ton coal [13]	5.32E-05	2.33E-04
Cyanide	2.50E-03	lb/ton coal [13]	2.51E-02	1.10E-01
2,4-Dinitrotoluene	2.80E-07	lb/ton coal [13]	2.81E-06	1.23E-05
Dimethyl sulfate	4.80E-05	lb/ton coal [13]	4.82E-04	2.11E-03
Ethylbenzene	9.40E-05	lb/ton coal [13]	9.44E-04	4.14E-03
Ethyl chloride	4.20E-05	lb/ton coal [13]	4.22E-04	1.85E-03
Ethylene dichloride	4.00E-05	lb/ton coal [13]	4.02E-04	1.76E-03
Ethylene dibromide	1.20E-06	lb/ton coal [13]	1.21E-05	5.28E-05
Formaldehyde	2.40E-04	lb/ton coal [13]	2.41E-03	1.06E-02
Hexane	6.70E-05	lb/ton coal [13]	6.73E-04	2.95E-03
Isophorone	5.80E-04	lb/ton coal [13]	5.83E-03	2.55E-02
Methyl bromide	1.60E-04	lb/ton coal [13]	1.61E-03	7.04E-03
Methyl chloride	5.30E-04	lb/ton coal [13]	5.32E-03	2.33E-02
Methyl hydrazine	1.70E-04	lb/ton coal [13]	1.71E-03	7.48E-03
Methyl methacrylate	2.00E-05	lb/ton coal [13]	2.01E-04	8.80E-04
Methyl tert butyl ether	3.50E-05	lb/ton coal [13]	3.52E-04	1.54E-03
Methylene chloride	2.90E-04	lb/ton coal [13]	2.91E-03	1.28E-02
Phenol	1.60E-05	lb/ton coal [13]	1.61E-04	7.04E-04
Propionaldehyde	3.80E-04	lb/ton coal [13]	3.82E-03	1.67E-02
Tetrachlorotheylene	4.30E-05	lb/ton coal [13]	4.32E-04	1.89E-03
Toluene	2.40E-04	lb/ton coal [13]	2.41E-03	1.06E-02
1,1,1,-Trichloroethane	2.00E-05	lb/ton coal [13]	2.01E-04	8.80E-04
Styrene	2.50E-05	lb/ton coal [13]	2.51E-04	1.10E-03
Xylenes	3.70E-05	lb/ton coal [13]	3.72E-04	1.63E-03
Vinyl acetate	7.60E-06	lb/ton coal [13]	7.63E-05	3.34E-04
HCl	1.20E+00	lb/ton coal [14]	1.21E+01	5.28E+01
HF	1.50E-01	lb/ton coal [14]	1.51E+00	6.60E+00
Antimony	1.80E-05	lb/ton coal [15]	1.81E-04	7.92E-04
Arsenic	4.10E-04	lb/ton coal [15]	4.12E-03	1.80E-02
Beryllium	2.10E-05	lb/ton coal [15]	2.11E-04	9.24E-04
Cadmium	5.10E-05	lb/ton coal [15]	5.12E-04	2.24E-03
Chromium	2.60E-04	lb/ton coal [15]	2.61E-03	1.14E-02
Cobalt	1.00E-04	lb/ton coal [15]	1.00E-03	4.40E-03
Lead	4.20E-04	lb/ton coal [15]	4.22E-03	1.85E-02
Manganese	4.90E-04	lb/ton coal [15]	4.92E-03	2.16E-02
Mercury	8.30E-05	lb/ton coal [15]	8.34E-04	3.65E-03
Nickel	2.80E-04	lb/ton coal [15]	2.81E-03	1.23E-02
Selenium	1.30E-03	lb/ton coal [15]	1.31E-02	5.72E-02
TOTAL HAPs			13.68	59.93

Notes:
[1] Design value
[2] Coal Usage (tons/hr) = Heat Input (MMBtu/hr) x 1000000 Btu/MMBtu ÷ [Coal Higher Heating Value (Btu/lb) x 2000 lb/ton]
[3] a) Emission Rate (lb/hr) = Emission Factor (lb/MMBtu) x Heat Input (MMBtu/hr)
b) Emission Rate (lb/hr) = Emission Factor (lb/MMscf) ÷ Natural Gas Higher Heating Value (Btu/scf) x Heat Input (MMBtu/hr)
[4] Emission Rate (tpy) = Emission Rate (lb/hr) x Hours of Operation (hr/yr) ÷ 2000 lb/ton
[5] The lb/MMBtu emission rate is based on a BACT determination.
[6] The lb/hr emission rate is based on a BACT determination.
[7] PM/PM_{10} Emission Factor (lb/MMBtu) x $PM_{2.5}$:PM_{10} Ratio
[8] AP-42, Table 1.1-20, Page 1.1-42, low-volatile bituminous coal
[9] AP-42, Table 1.1-19, Page 1.1-40, PC-fired, dry bottom, tangentially fired
[10] GHG Emissions = CO_2 Emissions + CH_4 Emissions + N_2O Emissions
[11] CO_2e Emissions = (CO_2 Emissions x 1) + (CH_4 Emissions x 21) + (N_2O Emissions x 310)
[12] AP-42, Table 1.1-13, Page 1.1-33
[13] AP-42, Table 1.1-14, Page 1.1-34
[14] AP-42, Table 1.1-15, Page 1.1-36
[15] AP-42, Table 1.1-18, Page 1.1-39

Appendix A: Emission Calculations
Natural Gas Combustion Only
MMBTU/HR >100
Utility Boiler

Company Name: Tate & Lyle Ingredients Americas LLC
Address City IN Zip: 2245 North Sagamore Parkway, Lafayette, IN 47904
Significant Source Mod No.: 157-34094-00003
Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
231.0	1020	1983.9

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	Nox**	VOC	CO**
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	0.1 (lb/MMBtu)	5.5	0.07 (lb/MMBtu)
Potential Emission in tons/yr	1.9	7.5	7.5	0.6	101.2	5.5	70.8

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
PM2.5 emission factor is condensable and filterable PM2.5 combined.
**Emission Factors for Nox and CO: are vendor data in mmbtu/hr

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-01-006-01, 1-01-006-04
(AP-42 Supplement D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Emissions (tpy) for Nox and CO = (MMBtu/hr) x Emission Factor (lb/MMBtu) x 8760 (hr/yr) / 2000 (lb/ton)
See page 5 for HAPs emissions calculations.

Appendix A: Emission Calculations
Natural Gas Combustion Only
MMBTU/HR >100
HAPs Emissions

Company Name: Tate & Lyle Ingredients Americas LLC
Address City IN Zip: 2245 North Sagamore Parkway, Lafayette, IN 47904
Significant Source Mod No.: 157-34094-00003
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Reviewer: Ghassan Shalabi
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	HAPs - Organics						
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene		
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03		
Potential Emission in tons/yr	2.08E-03	1.19E-03	7.44E-02	1.79E+00	3.37E-03	Total	1.87E+00

	HAPs - Metals						
	Lead	Cadmium	Chromium	Manganese	Nickel		
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03		
Potential Emission in tons/yr	4.96E-04	1.09E-03	1.39E-03	3.77E-04	2.08E-03	Total	5.44E-03
						Total HAPs	1.87E+00

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
See Page 6 for Greenhouse Gas calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MMBTU/HR >100
Greenhouse Gas Emissions

Company Name: Tate & Lyle Ingredients Americas LLC
Address City IN Zip: 2245 North Sagamore Parkway, Lafayette, IN 47904
Significant Source Mod No.: 157-34094-00003
Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	119,033	2.3	2.2
Summed Potential Emissions in tons/yr	119,037		
CO2e Total in tons/yr	119,740		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

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

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emission Calculations
Natural Gas Combustion Only
MMBTU/HR >100
Utility Boiler

Company Name:
Address City IN Zip:
Permit Number:
Plt ID:
Reviewer:
Date:

	tpy		
Pollutant	Coal	NG	Change
NOx	708.25	101.178	-607.068
CO	44.68	70.8246	26.1486
PM	50.59	1.884688	-48.7043
PM10	50.59	7.538753	-43.0502
PM2.5	17.63	7.538753	-10.0915
SO2	1214.14	0.595165	-1213.54
VOC	4.82	5.455676	0.637676
CO2e [11]	73,020	119,740	46720.27

Appendix A: Emissions Calculations
Tate & Lyle, Sagamore

Company Name: Tate & Lyle Ingredients Americas LLC
Address City IN Zip: 2245 North Sagamore Parkway, Lafayette, IN 47904
Significant Source Mod No.: 157-34094-00003
Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

Sagamore Wet Milling Yield Improvement and Starch Drying Expansion Project Project and Net Emissions Increase Summary

Pollutant	Project Emissions Increase (tpy)			Contemporaneous Changes (tpy)	Net Emissions Increase (tpy)	PSD SER (tpy)*	Major Modification?
	New Units (PTE)	Existing Units (ATPA)	Total				
PM	33.24	2.92	36.16	-33.44	2.73	25	No
PM_{10}	46.47	3.45	49.92	-75.47	-25.55	15	No
$PM_{2.5}$	33.82	2.61	36.43	-60.04	-23.61	10	No
SO_2	10.67	3.09	13.76			40	No
NO_x	9.11	4.27	13.38			40	No
CO	18.22	66.88	85.10			100	No
VOC	29.86	9.97	39.83			40	No
H_2SO_4	0.72	0.02	0.74			7	No
F	0.00	0.00	0.00			3	No
Pb	0.00	0.00	0.00			0.6	No
GHGs	26648.50	4329.51	30,978			75,000	No

* SER = Significant Emission Rate; for GHGs, SER refers to threshold used to determine whether GHGs are "subject to regulation."

Appendix A: Emissions Calculations
Tate & Lyle, Sagamore

Company Name: Tate & Lyle Ingredients Americas LLC
Address City IN Zip: 2245 North Sagamore Parkway, Lafayette, IN 47904
Significant Source Mod No.: 157-34094-00003
Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

New Emissions Units

			Potential Emissions (tpy)											
Stack ID	Unit ID	Unit Description	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC	H_2SO_4	F	Pb	GHGs	
17	21F5	Gluten Vacuum Filter	0.00	0.00	0.00	0.86	0.00	0.00	4.65	0.00	0.00	0.00	0.00	*
17	21C105	Gluten Filter Vacuum Pump	0.00	0.00	0.00	0.21	0.00	0.00	2.35	0.00	0.00	0.00	0.00	*
17	15J39 15J40	Grit Starch Separator Screens	0.00	0.00	0.00	0.48	0.00	0.00	0.41	0.00	0.00	0.00	0.00	*
452	15V263	Dent 1 Starch Storage Tank	0.00	0.00	0.00	0.44	0.00	0.00	0.44	0.00	0.00	0.00	0.00	
462	18C101	Powdered Carbon Transfer Receiver	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*
408A 408B	19D304	Starch Roll Dryer #304	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	
409A 409B	19D305	Starch Roll Dryer #305	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	
361	52D210	Agglomerator #2 (includes 2500scfm throat cooling air)	6.52	11.24	8.37	0.05	3.50	7.01	0.47	0.00	0.00	0.00	10,249	
	52Y211	Agglomerator #2 External Fluid Bed	1.88	1.88	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	52C221	Agglomerator #2 Fines Recycle	0.38	0.38	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
401 402	52V250 52V251	Product Bin #250 Product Bin #251	0.35	0.35	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
362	52Z245/ V245 52Z247/ V247 52V225 52C224	Agglomerator Tote Bagger #5 and Head Hopper Agglomerator Packer #7 and Head Hopper Reprocess Bag Dump Reprocess Bag Dump Transfer Line	0.55	0.55	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
388	54D450	Starch Flash Dryer #4	19.56	28.06	21.52	0.08	5.61	11.21	8.26	0.00	0.00	0.00	16,399	
389	54V470	Starch Densifier Mill Surge Hopper	0.07	0.07	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
385 386 387 107 108 109	54V440 54V441 54V4CC 7V48 7V49 7V50	Product Bin #440 Product Bin #441 Product Bin #4CC Product Bin #3 Product Bin #2 Product Bin #1	1.03	1.03	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
380	56F601 56V600 56Z600 56C630	Packer #6 Product Receiver; Packer Head Hopper; Bag Packer; and Reprocess Bag Dump Transfer Line	0.55	0.55	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
381	56F602 56 Bldg Conv 56V630 52 Bldg Conv	Packer #6 House Dust Collector Aspiration of bag conveying belts, ultrasonic sealers Aspiration of reprocess bag dump (56V630) Aspiration of Agglomerator #2 bag packer conveying equipment	2.35	2.35	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
163A	18F57	Precoat Vacuum Filter	0.00	0.00	0.00	0.44	0.00	0.00	0.88	0.00	0.00	0.00	0.00	
161A	18C57	Precoat Filter Vacuum Pump	0.00	0.00	0.00	0.44	0.00	0.00	0.88	0.00	0.00	0.00	0.00	
17	18V513	Atmospheric Jet Conversion Flash Chamber for Maltodextrin	0.00	0.00	0.00	7.23	0.00	0.00	3.29	0.72	0.00	0.00	0.00	*
460	18V230	Enzyme Liquefaction Reactor	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.00	
461	18V231	Enzyme Liquefaction Reactor	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.00	
50	45V298	Propylated Starch Reactor	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	
417	45V298-PRV	Propylene Oxide Reactor Press. Relief Vent	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
417	45C298	Propylene Oxide Reactor Vent Fan	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	
50	45V299	Propylated Starch Reactor	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	
418	45V299-PRV	Propylene Oxide Reactor Press. Relief Vent	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
418	45C299	Propylene Oxide Reactor Vent Fan	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	
455	18V274	Oxidized Starch Reactor	0.00	0.00	0.00	0.00	0.00	0.00	5.71	0.00	0.00	0.00	0.00	
456	18V108	Sodium Bisulfite Storage Tank	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
457	18V109	Sodium Chlorite Storage Tank	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
419	54V401	Flash 4 Slurry Hold Tank	0.00	0.00	0.00	0.44	0.00	0.00	Emissions included in Starch Flash Dryer #4 (54D450)	0.00	0.00	0.00	0.00	
420	54V403	Flash 4 Larox Filter Feed Tank	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
421	54F421 54V421	Flash 4 Larox Filter and Air Release Tank	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
422	54F422 54F422	Flash 4 Larox Filter and Air Release Tank	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
423	54F4MM 54V4MM	Flash 4 Larox Filter and Air Release Tank	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
163B	18F53	19 Rolls Rotary Vacuum Filter	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.00	
161B	18C233	19 Rolls Rotary Filter Vacuum Pump	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
		TOTAL	**33.24**	**46.47**	**33.82**	**10.67**	**9.11**	**18.22**	**29.86**	**0.72**	**0.00**	**0.00**	**26,648**	

Appendix A: Emissions Calculations
Tate & Lyle, Sagamore

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Significant Source Mod No.: 157-34094-00003
Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

Existing Emissions Units

			Baseline Actual Emissions (tpy)										
Group #	Unit ID	Group/Unit Description	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC	H_2SO_4	F	Pb	GHGs
Gr: 001	8C300	Corn Receiving & Handling	0.78	1.49	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: RTO EXH	48F201/48F202	RTO Exhaust (includes process emissions from 21D501, 21D301, 21D401, 48D101)	1.07	12.28	11.92	10.30	See Gr: 003, 6,7,8		10.87	0.10	0.00	0.00	See Gr: 003, 6,7,8
Gr: 002	21D501	Fiber Flash Dryer					Included in Gr: RTO EXH						
Gr: 003	21B501	Fiber Flash Dryer NG Burner	0.34	0.93	0.93	0.09	10.55	46.08	0.85	0.00	0.00	0.00	16,676
Gr: 004	21D301	Feed Steam Tube Dryer					Included in Gr: RTO EXH						
Gr: 005	21D401	Germ Steam Tube Dryer											
Gr: 006	48D101	Gluten Flash Dryer					5.14	4.32	Included in Gr: RTO EXH		0.00	0.00	6,098
Gr: 007	48F201	RTO #1 Burner		Included in Gr: RTO EXH			0.82	0.69			0.00	0.00	973
Gr: 008	48F202	RTO #2 Burner					0.82	0.69			0.00	0.00	973
Gr: 010	21G351, 352	Feed Mill Aspiration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 011	21C36	Meal Transfer to Bin	3.50	3.50	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 019	8V62	Meal Bin	0.17	0.17	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 020	8V63	Meal Bin	0.17	0.17	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 021	8V53	Germ Bin	0.18	0.18	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 022	8V54	Germ Bin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 023	12C39	Co-Product Transfer to Loadout	0.88	0.88	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 024	12C40	Rail Loadout Aspiration	2.11	2.11	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 026	Multiple	Steep, Mill & Feed house SO2 Ventilation	0.00	0.00	0.00	2.36	0.00	0.00	107.46	0.00	0.00	0.00	0.00
Gr: 031	9V31	Filter-Aid Silo	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 032	18C18	Filter-Aid Transfer	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 033	9V144	Soda Ash Storage Tank	0.12	0.12	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 034	9C30	Carbon Unloading to Silo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 037	45V250	Sodium Sulfate Bin	0.13	0.13	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 195	Multiple	Starch Modification Propylene Oxide (P.O.) Potentially Affected Emissions Unit Group	0.00	0.00	0.00	0.00	0.00	0.00	10.41	0.00	0.00	0.00	0.00
Gr: 995	N/A	Plant Fugitive Emissions	14.48	2.98	0.70	8.68	0.00	0.00	21.96	0.00	0.00	0.00	0.00
Gr: 102	31B1	CoGen Boiler	19.19	63.38	53.79	376.96	277.67	8.40	2.25	3.77	0.20	0.00	159,633
Gr: 096,7,8	11B1, 2, 3	Natural Gas Boilers 11B1, 11B2, 11B3	0.08	0.32	0.32	0.03	11.77	3.53	0.23	0.00	0.00	0.00	5,018
		TOTAL	**43.22**	**88.66**	**72.50**	**398.42**	**306.76**	**63.69**	**154.03**	**3.87**	**0.20**	**0.00**	**189,372**

			Projected Actual Emissions (tpy)										
Group #	Unit ID	Group/Unit Description	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC	H_2SO_4	F	Pb	GHGs
Gr: 001	8C300	Corn Receiving & Handling	0.96	1.83	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: RTO EXH	48F201/48F202	RTO Exhaust (includes process emissions from 21D501, 21D301, 21D401, 48D101)	1.31	15.04	14.60	12.61	See Gr: 003, 6,7,8		13.31	0.13	0.00	0.00	See Gr: 003, 6,7,8
Gr: 002	21D501	Fiber Flash Dryer					Included in Gr: RTO EXH						
Gr: 003	21B501	Fiber Flash Dryer NG Burner	0.42	1.13	1.13	0.11	12.86	56.18	1.04	0.00	0.00	0.00	20,331
Gr: 004	21D301	Feed Steam Tube Dryer					Included in Gr: RTO EXH						
Gr: 005	21D401	Germ Steam Tube Dryer											
Gr: 006	48D101	Gluten Flash Dryer					6.33	5.32	Included in Gr: RTO EXH		0.00	0.00	7,514
Gr: 007	48F201	RTO #1 Burner		Included in Gr: RTO EXH			1.00	0.84			0.00	0.00	1,192
Gr: 008	48F202	RTO #2 Burner					1.08	0.91			0.00	0.00	1,290
Gr: 010	21G351, 352	Feed Mill Aspiration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 011	21C36	Meal Transfer to Bin	4.31	4.31	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 019	8V62	Meal Bin	0.21	0.21	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 020	8V63	Meal Bin	0.21	0.21	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 021	8V53	Germ Bin	0.22	0.22	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 022	8V54	Germ Bin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 023	12C39	Co-Product Transfer to Loadout	1.07	1.07	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 024	12C40	Rail Loadout Aspiration	2.20	2.20	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 026	Multiple	Steep, Mill & Feed house SO2 Ventilation	0.00	0.00	0.00	2.89	0.00	0.00	118.26	0.00	0.00	0.00	0.00
Gr: 031	9V31	Filter-Aid Silo	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 032	18C18	Filter-Aid Silo	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 033	9V144	Soda Ash Storage Tank	0.14	0.14	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 034	9C30	Carbon Unloading to Silo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 037	45V250	Sodium Sulfate Bin	0.14	0.14	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 195	Multiple	Starch Modification Propylene Oxide (P.O.) Potentially Affected Emissions Unit Group	0.00	0.00	0.00	0.00	0.00	0.00	14.44	0.00	0.00	0.00	0.00
Gr: 995	N/A	Plant Fugitive Emissions	17.05	3.52	0.83	10.63	0.00	0.00	26.90	0.00	0.00	0.00	0.00
Gr: 102	31B1	CoGen Boiler	1.80	7.20	7.20	0.57	96.68	67.68	5.21	0.01	0.00	0.00	113,117
Gr: 096,7,8	11B1, 2, 3	Natural Gas Boilers 11B1, 11B2, 11B3	0.10	0.39	0.39	0.03	14.42	4.33	0.28	0.00	0.00	0.00	6,146
		TOTAL	**30.17**	**37.66**	**29.88**	**26.85**	**132.37**	**135.25**	**179.45**	**0.13**	**0.00**	**0.00**	**149,590**

Appendix A: Emissions Calculations
Tate & Lyle, Sagamore

Company Name: Tate & Lyle Ingredients Americas LLC
Address City IN Zip: 2245 North Sagamore Parkway, Lafayette, IN 47904
Significant Source Mod No.: 157-34094-00003
Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

			Excludable Emissions (tpy)										
Group #	Unit ID	Group/Unit Description	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC	H_2SO_4	F	Pb	GHGs
Gr: 001	8C300	Corn Receiving & Handling	0.06	0.12	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: RTO EXH	48F201/48F202	RTO Exhaust (includes process emissions from 21D501, 21D301, 21D401, 48D101)	0.09	0.99	0.96	0.83	See Gr: 003, 6,7,8		0.88	0.01	0.00	0.00	See Gr: 003, 6,7,8
Gr: 002	21D501	Fiber Flash Dryer					Included in Gr: RTO EXH						
Gr: 003	21B501	Fiber Flash Dryer NG Burner	0.03	0.08	0.08	0.01	0.92	4.00	0.07	0.00	0.00	0.00	1,447
Gr: 004	21D301	Feed Steam Tube Dryer					Included in Gr: RTO EXH						
Gr: 005	21D401	Germ Steam Tube Dryer											
Gr: 006	48D101	Gluten Flash Dryer					0.30	0.26	Included in Gr: RTO EXH		0.00	0.00	361
Gr: 007	48F201	RTO #1 Burner		Included in Gr: RTO EXH			0.07	0.06			0.00	0.00	78.6
Gr: 008	48F202	RTO #2 Burner					0.10	0.08			0.00	0.00	114
Gr: 010	21G351, 352	Feed Mill Aspiration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 011	21C36	Meal Transfer to Bin	0.21	0.21	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 019	8V62	Meal Bin	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 020	8V63	Meal Bin	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 021	8V53	Germ Bin	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 022	8V54	Germ Bin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 023	12C39	Co-Product Transfer to Loadout	0.07	0.07	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 024	12C40	Rail Loadout Aspiration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 026	Multiple	Steep, Mill & Feed house SO2 Ventilation	0.00	0.00	0.00	0.19	0.00	0.00	8.67	0.00	0.00	0.00	0.00
Gr: 031	9V31	Filter-Aid Silo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 032	18C18	Filter-Aid Silo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 033	9V144	Soda Ash Storage Tank	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 034	9C30	Carbon Unloading to Silo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 037	45V250	Sodium Sulfate Bin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 195	Multiple	Starch Modification Propylene Oxide (P.O.) Potentially Affected Emissions Unit Group	0.00	0.00	0.00	0.00	0.00	0.00	4.03	0.00	0.00	0.00	0.00
Gr: 995	N/A	Plant Fugitive Emissions	0.92	0.19	0.04	0.70	0.00	0.00	1.77	0.00	0.00	0.00	0.00
Gr: 102	31B1	CoGen Boiler	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 096,7,8	11B1, 2, 3	Natural Gas Boilers 11B1, 11B2, 11B3	0.01	0.03	0.03	0.00	0.95	0.29	0.02	0.00	0.00	0.00	405
		TOTAL	1.42	1.72	1.35	1.73	2.33	4.67	15.45	0.01	0.00	0.00	2,405

			Project Emissions Increase (tpy)										
			PM10 & PT	PM10 & PT	PM2.5	SO2	NOx	CO	VOC	H2SO4			
Group #	Unit ID	Group/Unit Description	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC	H_2SO_4	F	Pb	GHGs
Gr: 001	8C300	Corn Receiving & Handling	0.11	0.21	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: RTO EXH	48F201/48F202	RTO Exhaust (includes process emissions from 21D501, 21D301, 21D401, 48D101)	0.15	1.77	1.72	1.48	See Gr: 003, 6,7,8		1.57	0.01	0.00	0.00	See Gr: 003, 6,7,8
Gr: 002	21D501	Fiber Flash Dryer					Included in Gr: RTO EXH						
Gr: 003	21B501	Fiber Flash Dryer NG Burner	0.05	0.12	0.12	0.01	1.40	6.10	0.11	0.00	0.00	0.00	2,208
Gr: 004	21D301	Feed Steam Tube Dryer					Included in Gr: RTO EXH						
Gr: 005	21D401	Germ Steam Tube Dryer											
Gr: 006	48D101	Gluten Flash Dryer					0.89	0.75	Included in Gr: RTO EXH		0.00	0.00	1,055
Gr: 007	48F201	RTO #1 Burner		Included in Gr: RTO EXH			0.12	0.10			0.00	0.00	140.3
Gr: 008	48F202	RTO #2 Burner					0.17	0.14			0.00	0.00	203
Gr: 010	21G351, 352	Feed Mill Aspiration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 011	21C36	Meal Transfer to Bin	0.61	0.61	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 019	8V62	Meal Bin	0.03	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 020	8V63	Meal Bin	0.03	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 021	8V53	Germ Bin	0.03	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 022	8V54	Germ Bin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 023	12C39	Co-Product Transfer to Loadout	0.13	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 024	12C40	Rail Loadout Aspiration	0.10	0.10	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 026	Multiple	Steep, Mill & Feed house SO2 Ventilation	0.00	0.00	0.00	0.34	0.00	0.00	2.13	0.00	0.00	0.00	0.00
Gr: 031	9V31	Filter-Aid Silo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 032	18C18	Filter-Aid Silo	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 033	9V144	Soda Ash Storage Tank	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 034	9C30	Carbon Unloading to Silo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 037	45V250	Sodium Sulfate Bin	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 195	Multiple	Starch Modification Propylene Oxide (P.O.) Potentially Affected Emissions Unit Group	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gr: 995	N/A	Plant Fugitive Emissions	1.64	0.34	0.08	1.25	0.00	0.00	3.16	0.00	0.00	0.00	0.00
Gr: 102	31B1	CoGen Boiler	0.00	0.00	0.00	0.00	0.00	59.28	2.96	0.00	0.00	0.00	0.00
Gr: 096,7,8	11B1, 2, 3	Natural Gas Boilers 11B1, 11B2, 11B3	0.01	0.05	0.05	0.00	1.70	0.51	0.03	0.00	0.00	0.00	723
		TOTAL	**2.92**	**3.45**	**2.61**	**3.09**	**4.27**	**66.88**	**9.97**	**0.02**	**0.00**	**0.00**	**4,330**

Appendix A: Emissions Calculations
Tate & Lyle, Sagamore

Company Name: Tate & Lyle Ingredients Americas LLC
Address City IN Zip: 2245 North Sagamore Parkway, Lafayette, IN 47904
Significant Source Mod No.: 157-34094-00003
Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

Net Emissions Increases and Decreases

Project	Permit #	Date	Description	Emissions Increase/Decrease (tpy)			Reference / Notes
				PM	PM_{10}	$PM_{2.5}$	
1	27720 & 29633	5/8/2009 & 11/10/2010	Operational change to produce oxidized starch on nine existing starch reactors	0.03	0.03	0.03	[1]
2	30823	10/31/2011	41 Bldg. house vacuum system	0.16	0.16	0.16	[2]
3	TBD	TBD	CoGen (coal) boiler natural gas conversion	-19.23	-61.27	-50.75	[3]
4	TBD	TBD	Special starch belt dryer system shutdown	-14.40	-14.40	-9.48	[4]
			Total	-33.44	-75.47	-60.04	

References/Notes

[1] PTE emissions increase as documented in permit record
[2] = 0.01 gr/scf * 500 acfm * (460 + 68) / (460 + 150) * 60 min/hr * lb/7000 gr * 8760 hrs/yr / 2000 lb/ton; proposed limit
[3] See sheets: Coal Blr Calc Summary & Coal Blr Calc Detail
[4] See sheet: Belt Dryer Sys Shutdown

Company Name: Tate & Lyle Ingredients Americas LLC
Address City IN Zip: 2245 North Sagamore Parkway, Lafayette, IN 47904
Significant Source Mod No.: 157-34094-00003
Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

Wet Milling and Yield Improvement New Emissions Units

A. New Emissions Unit Identification

S/V ID	Emission Unit ID(s)	Emission Unit Description	Control Device	Control Device ID	Comments
17	21F5	Gluten Vacuum Filter	Scrubber	15F401	New filter
17	21C105	Gluten Filter Vacuum Pump	Scrubber	15F401	New pump
17	15J39 15J40	Grit Starch Separator Screens	Scrubber	15F401	2 new screens added to Screens 15J19 and 15J19 to serve new third grind mill. Mill replaces smaller third
452	15V263	Dent 1 Starch Storage Tank	None	None	Insignificant Activity

B. PTE Calculations

Data Element			Data Designation	Value		Reference/Calculation
Molecular Weights						
	SO2		[A]	64	lb/mol	
	Ethanol		[B]	46	lb/mol	
Molar Volume			[C]	385.3	ft^3/mol	68 °F; 1 atm.
Gluten Filter Test Data						
	Temperature		[D]	56	°F	2/28/2008 source test
	Flow Rate		[E]	3,221	acfm	2/28/2008 source test
	Flow Rate		[F]	3,296	scfm	= [E] * (460 + 68) / (460 + [D])
	SO2 Concentration		[G]	6	ppm	Conservative value from 1996 test
	Ethanol Concentration		[H]	45	ppm	2/28/2008 source test
Gluten Filter Vacuum Pump Test Data						
	Temperature		[I]	118	°F	2/28/2008 source test
	Flow Rate		[J]	891	acfm	2/28/2008 source test
	Flow Rate		[K]	814	scfm	= [E] * (460 + 68) / (460 + [D])
	SO2 Concentration		[L]	6	ppm	Conservative value from 1996 test
	Ethanol Concentration		[M]	92	ppm	2/28/2008 source test
Third Grind Screen Test Data						
	Flow Rate		[N]	354	scfm	Testing performed by Tate & Lyle on 15J15 & 15J19 screens
	SO2 Concentration		[O]	31.0	ppm	Testing performed by Tate & Lyle on 15J15 & 15J19 screens
	Ethanol Concentration		[P]	37.3	ppm	Testing performed by Tate & Lyle on 15J15 & 15J19 screens
Scrubber 15F401 Minimum Removal Efficiency						
	SO2		[Q]	90%	%	Existing permit condition
	VOC		[R]	25%	%	Existing permit condition
Emission Rates						
	Gluten Filter					
		SO2	[S]	0.09	tons/yr	= [G] / 1 E+06 * [F] / [C] * [A] * (1 - [Q]) * 60 min/hr * 8760 hrs/hr / 2000 lb/ton
		VOC	[T]	3.49	tons/yr	= [H] / 1 E+06 * [F] / [C] * [B] * (1 - [R]) * 60 min/hr * 8760 hrs/hr / 2000 lb/ton
	Gluten Filter Vacuum Pump					
		SO2	[U]	0.02	tons/yr	= [L] / 1 E+06 * [K] / [C] * [A] * (1 - [Q]) * 60 min/hr * 8760 hrs/hr / 2000 lb/ton
		VOC	[V]	1.76	tons/yr	= [M] / 1 E+06 * [K] / [C] * [B] * (1 - [R]) * 60 min/hr * 8760 hrs/hr / 2000 lb/ton
	Third Grind Mill Screens					
		SO2	[W]	0.05	tons/yr	= [O] / 1 E+06 * [N] / [C] * [A] * (1 - [Q]) * 60 min/hr * 8760 hrs/hr / 2000 lb/ton
		VOC	[X]	0.31	tons/yr	= [P] / 1 E+06 * [N] / [C] * [B] * (1 - [R]) * 60 min/hr * 8760 hrs/hr / 2000 lb/ton

Appendix A: Emissions Calculations
Tate & Lyle, Sagamore

Company Name: Tate & Lyle Ingredients Americas LLC
Address City IN Zip: 2245 North Sagamore Parkway, Lafayette, IN 47904
Significant Source Mod No.: 157-34094-00003
Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

Starch Expansion New Emissions Units

A. Process Emissions

S/V ID	Emission Unit ID(s)	Emission Unit Description	Control Device Type	Control Device ID	Temp (Deg. F)	Design Flow		Notes	PM			PM10			PM2.5: PM10 Ratio [9]	PM2.5			SO2		VOC		H2SO4	
						acfm [1]	scfm [2]		gr/scf [3]	lb/hr [4]	tpy [5]	gr/scf [6]	lb/hr [7]	tpy [8]		gr/scf [10]	lb/hr [11]	tpy [12]	tpy	Ref. / Calc.	tpy	Ref. / Calc.	tpy	Ref. / Calc.
Refinery Area																								
462	18C101	Powdered Carbon Transfer Receiver	Bagfilter	18F101	150	120	104		0.005	0.00	0.02	0.005	0.00	0.02	0.54762	0.0027	0.002	0.01						
19 BLDG. ROLL DRYER EXPANSION AND 41 BLDG.																								
408A 408B	19D304	Starch Roll Dryer #304	None	None	110	11,400	10,560														0.03	[15]		
409A 409B	19D305	Starch Roll Dryer #305	None	None	110	11,400	10,560														0.03	[15]		
AGGLOMERATION #2 SYSTEM																								
361	52D210	Agglomerator #2 (includes 2500scfm throat cooling air)	4 Product Cyclones to Bagfilter	52F220-52F223/ 52F230	245	75,338	56,423		0.003	1.45	6.35	0.005	2.42	10.59	0.54762	0.0036	1.762	7.72						
	52Y211	Agglomerator #2 External Fluid Bed			200	12,500	10,000		0.005	0.43	1.88	0.005	0.43	1.88	0.54762	0.0027	0.235	1.03						
	52C221	Agglomerator #2 Fines Recycle			245	2,670	2,000		0.005	0.09	0.38	0.005	0.09	0.38	0.54762	0.0027	0.047	0.21						
401	52V250	Product Bin #250	Bagfilter	52F250	110	2,000	1,853	[13]	0.005	0.08	0.35	0.005	0.08	0.35	0.54762	0.0027	0.043	0.19						
402	52V251	Product Bin #251	Bagfilter	52F251	110	2,000	1,853		0.005	0.08		0.005	0.08		0.54762	0.0027	0.043							
362	52Z245/ V245 52Z247/ V247 52V225 52C224	Agglomerator Tote Bagger #5 and Head Hopper Agglomerator Packer #7 and Head Hopper Reprocess Bag Dump Reprocess Bag Dump Transfer Line	Bagfilter	52F225	80	3,000	2,933		0.005	0.13	0.55	0.005	0.13	0.55	0.54762	0.0027	0.069	0.30						
FLASH DRYER #4 SYSTEM																								
388	54D450	Starch Flash Dryer #4	6 Product Cyclones to	54F451-54F456/ 54F460	105	110,000	102,796		0.005	4.41	19.30	0.007	6.17	27.01	0.66092	0.0053	4.674	20.47			7.50	[16]		
389	54V470	Starch Densifier Mill Surge Hopper	Bagfilter	54F471	140	400	352		0.005	0.02	0.07	0.005	0.02	0.07	0.66092	0.0033	0.010	0.04						
385	54V440	Product Bin #440	Bagfilter	54F440	70	5,500	5,479	[14]	0.005	0.23	1.03	0.005	0.23	1.03	0.54762	0.0027	0.129	0.56						
386	54V441	Product Bin #441	Bagfilter	54F441	70	5,500	5,479		0.005	0.23		0.005	0.23		0.54762	0.0027	0.129							
387	54V4CC	Product Bin #4CC	Bagfilter	54F4CC	70	5,500	5,479		0.005	0.23		0.005	0.23		0.54762	0.0027	0.129							
107	7V48	Product Bin #3	Bagfilter	7F71	70	5,500	5,479		0.005	0.23		0.005	0.23		0.54762	0.0027	0.129							
108	7V49	Product Bin #2	Bagfilter	7F72	70	5,500	5,479		0.005	0.23		0.005	0.23		0.54762	0.0027	0.129							
109	7V50	Product Bin #1	Bagfilter	7F73	70	5,500	5,479		0.005	0.23		0.005	0.23		0.54762	0.0027	0.129							
PACKER #6 SYSTEM																								
380	56F601 56V600 56Z600 56C630	Packer #6 Product Receiver; Packer Head Hopper; Bag Packer; and Reprocess Bag Dump Transfer Line	Bagfilter	56F601	80	3,000	2,933		0.005	0.13	0.55	0.005	0.13	0.55	0.54762	0.0027	0.069	0.30						
381	56F602 56 Bldg Conv 56V630 52 Bldg Conv	Packer #6 House Dust Collector Aspiration of bag conveying belts, ultrasonic sealers Aspiration of reprocess bag dump (56V630) Aspiration of Agglomerator #2 bag packer conveying equipment	Bagfilter	56F602	80	16,000	15,644		0.004	0.54	2.35	0.004	0.54	2.35	0.54762	0.0022	0.294	1.29						
SYRUP REFINERY																								
163A	18F57	Precoat Vacuum Filter	None	None															0.44	[17]	0.88	[18]		
161A	18C57	Precoat Filter Vacuum Pump	None	None															0.44	[17]	0.88	[18]		
17	18V513	Atmospheric Jet Conversion Flash Chamber for Maltodextrin	Scrubber	15F401															7.23	[19]	3.29	[20]	0.07	[21]
460	18V230	Enzyme Liquefaction Reactor	None	None																	0.44	[22]		
461	18V231	Enzyme Liquefaction Reactor	None	None																	0.44	[22]		

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Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

STARCH MODIFICATION																								
50	45V298	Propylated Starch Reactor	Scrubber	45F212																	0.52	[23]		
417	45V298-PRV	Propylene Oxide Reactor Press. Relief Vent	None	None																				
417	45C298	Propylene Oxide Reactor Vent Fan	None	None																	0.06	[23]		
50	45V299	Propylated Starch Reactor	Scrubber	45F212																	0.52	[23]		
418	45V299-PRV	Propylene Oxide Reactor Press. Relief Vent	None	None																				
418	45C299	Propylene Oxide Reactor Vent Fan	None	None																	0.06	[23]		
455	18V274	Oxidized Starch Reactor	None	None																	5.71	[24]		
456	18V108	Sodium Bisulfite Storage Tank	None	None																				
457	18V109	Sodium Chlorite Storage Tank	None	None																				
419	54V401	Flash 4 Slurry Hold Tank	None	None															0.44	[25]	Potential VOC emissions from these units included in Starch Flash Dryer # 4 (54D450) PTE estimate; based on system P.O. balance			
420	54V403	Flash 4 Larox Filter Feed Tank	None	None																				
421	54F421 54V421	Flash 4 Larox Filter and Air Release Tank	None	None																				
422	54F422 54F422	Flash 4 Larox Filter and Air Release Tank	None	None																				
423	54F4MM 54V4MM	Flash 4 Larox Filter and Air Release Tank	None	None																				
163B	18F53	19 Rolls Rotary Vacuum Filter	None	None																	0.44	[26]		
161B	18C233	19 Rolls Rotary Filter Vacuum Pump	None	None																				
TOTALS											**32.82**			**44.77**				**32.12**	**8.54**		**20.78**		**0.07**	

References / Calculation Detail

[1] Design flow rate, acfm
[2] Design flow rate, scfm
[3] Proposed potential/allowable PM concentration, filterable only
[4] = [3] x [2] x 60 min/hr / 7,000 gr/lb
[5] = [4] x 8760 hrs/yr / 2,000 lb/ton
[6] Proposed potential/allowable PM concentration, filterable + condensable
[7] = [6] x [2] x 60 min/hr / 7,000 gr/lb
[8] = [7] x 8760 hrs/yr / 2,000 lb/ton
[9] Particle size fraction from EPA PM database
[10] Proposed potential/allowable PM concentration, filterable + condensable
[11] = [6] x [2] x 60 min/hr / 7,000 gr/lb
[12] = [7] x 8760 hrs/yr / 2,000 lb/ton
[12] = Propylene oxide (P.O.) emissions - See
[13] Only one of the Agglomeration 2 Product Bins (241 and 242) can operate at a time
[14] The three belt dryer bins (Bins #1, #2, and #3) have been included as part of the Flash Dryer #4 System. They are existing units but will be permitted with a higher airflow and lower grain loading to match the other 3 new bins.
Only one of the six bins can operate at a time since product is received directly from the flash dryer.
[15] = 6 lbs P.O./100,000 lb propylated starch (c.w.) * 1 E+06 lbs/yr dryer P.O. starch production capacity / 2,000 lb/ton
[16] = 6 lbs P.O./100,000 lb propylated starch (c.w.) * 250 E+06 lbs/yr dryer P.O. starch production (proposed limit) / 2,000 lb/ton
[17] Conservative estimate based on Tate & Lyle test data from similar unit; = 0.10 lb/hr * 8,760 hrs/yr / 2,000 lb/ton
[18] Conservative estimate based on Tate & Lyle test data from similar unit; = 0.20 lb/hr * 8,760 hrs/yr / 2,000 lb/ton
[19] = 16.5 lb/hr @ 100 gpm * (1 - 90% scrubber SO2 control) * 8,760 hrs/yr / 2,000 lb/ton
[20] = 1 lb/hr @ 100 gpm * (1 - 25% scrubber SO2 control) * 8,760 hrs/yr / 2,000 lb/ton
[21] Conservatively estimated as 1% of SO2 emission rate (SO2 emission rate * 0.01)
[23] See sheet: P.O. Bal New Reactors
[24] See sheet: Ox Starch Reactor Detail
[25] Conservative estimate based on Tate & Lyle test data from similar unit; = 0.10 lb/hr * 8,760 hrs/yr / 2,000 lb/ton
[26] Conservative estimate based on Tate & Lyle test data from similar unit; = 0.10 lb/hr * 8,760 hrs/yr / 2,000 lb/ton

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Reviewer: Ghassan Shalabi
Date: June 26, 2014

B. Natural Gas Combustion Emissions

Data Element	Data Designation	Value		Reference/Calculation
Design Heat Input Capacity, Agglomerator #2	[A]	20	MMBtu/hr	Burner design specification
Design Heat Input Capacity, Starch Flash Dryer #4	[B]	32	MMBtu/hr	Burner design specification
Natural Gas HHV	[C]	1,020	Btu/cf	Default value from AP-42 Chapter 1.4 (7/98)
Emission Factors (natural gas combustion)				
PM Filterable	[D]	0.0019	lb/MMBtu	AP-42, Table 1.4-2 (7/98)
PM Condensable	[E]	0.0056	lb/MMBtu	AP-42, Table 1.4-2 (7/98)
PM10	[F]	0.0075	lb/MMBtu	AP-42, Table 1.4-2 (7/98)
PM2.5	[G]	0.0075	lb/MMBtu	AP-42, Table 1.4-2 (7/98)
SO2	[H]	5.88E-04	lb/MMBtu	AP-42, Table 1.4-2 (7/98)
NOx	[I]	0.04	lb/MMBtu	Burner design specification
CO	[J]	0.08	lb/MMBtu	Burner design specification
VOC	[K]	0.0054	lb/MMBtu	AP-42, Table 1.4-2 (7/98)
GHGs (CO2e)	[L]	117.0	lb/MMBtu	40 CFR 98 Subpart C, Tables C-1 and C-2
Potential Emissions, Agglomerator #2				
PM	[M]	0.16	tpy	[D] x [A] x 8,760 hrs/yr / 2,000 lb/ton
PM10	[N]	0.65	tpy	[F] x [A] x 8,760 hrs/yr / 2,000 lb/ton
PM2.5	[O]	0.65	tpy	[G] x [A] x 8,760 hrs/yr / 2,000 lb/ton
SO2	[P]	0.05	tpy	[H] x [A] x 8,760 hrs/yr / 2,000 lb/ton
NOx	[Q]	3.50	tpy	[I] x [A] x 8,760 hrs/yr / 2,000 lb/ton
CO	[R]	7.01	tpy	[J] x [A] x 8,760 hrs/yr / 2,000 lb/ton
VOC	[S]	0.47	tpy	[K] x [A] x 8,760 hrs/yr / 2,000 lb/ton
H2SO4	[T]	5.15E-04	tpy	[P] x 0.01
GHGs (CO2e)	[U]	10,249	tpy	[L] x [A] x 8,760 hrs/yr / 2,000 lb/ton
Potential Emissions, Starch Flash Dryer #4				
PM	[M]	0.26	tpy	[D] x [B] x 8,760 hrs/yr / 2,000 lb/ton
PM10	[N]	1.04	tpy	[F] x [B] x 8,760 hrs/yr / 2,000 lb/ton
PM2.5	[O]	1.04	tpy	[G] x [B] x 8,760 hrs/yr / 2,000 lb/ton
SO2	[P]	0.08	tpy	[H] x [B] x 8,760 hrs/yr / 2,000 lb/ton
NOx	[Q]	5.61	tpy	[I] x [B] x 8,760 hrs/yr / 2,000 lb/ton
CO	[R]	11.21	tpy	[J] x [B] x 8,760 hrs/yr / 2,000 lb/ton
VOC	[S]	0.76	tpy	[K] x [B] x 8,760 hrs/yr / 2,000 lb/ton
H2SO4	[T]	8.24E-04	tpy	[P] x 0.01
GHGs (CO2e)	[U]	16,399	tpy	[L] x [B] x 8,760 hrs/yr / 2,000 lb/ton

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Existing Affected Emissions Unit ATPA Calculations

Group or Unit #	Group or Process Unit Description & Calculation Basis	Pollutant or Other	Emission Factor	Units	BAE Calculation Text (unless otherwise noted)	Calc'n Result 2012	Calc'n Result 2011	Units	2011/2012 BAE (tpy)	PAE (tpy)	EE (tpy)	PEI (tpy)	PAE, PTE and EE Calc Text
General Calculation Inputs													
									Production based, not emissions				
Grind	Daily average grind	bu/d			(Annual grind) / (d/yr) {ignore leap year}	69,276	69,519	bu/d	69,398	85,000	5,602	10,000	Projected grind (bu/d); See: ATPA Prod Inputs
Grind	Annual grind	mmbu/yr			Annual grind from accounting reports	25.29	25.37	mmbu/yr	25.33	31.03	2.04	3.65	See sheet: ATPA Prod Inputs
Gr: 001	8C300, Corn Receiving & Handling												
Unit: 001	Stack: 433; 8F300 Dust Collector												
Pollutants	PM EF = average of 11/2/2007 and 10/10/2012 source test results (filterable only)	PM	0.0617	lb/kbu	tons/yr = (Emission Factor, lb/kbu) (mmbu/yr) (1000 kbu/mmbu) (1/2000 lb/ton)	0.780	0.783	tons/yr	0.781	0.957	0.063	0.113	PAE = BAE * (projected grind increase)
	PM10 EF = average of above source test results (filterable + condensable)	PM10	0.1177	lb/kbu		1.488	1.493	tons/yr	1.491	1.826	0.120	0.215	EE = (PAE - BAE) * (excludable portion of grind increase); if > PAE - BAE, EE = PAE - BAE PEI = PAE - BAE - EE
	PM2.5 = PM Filt. * Ratio for SCC = 30200751, Ratio = 0.12500, + average condensable from above test results (0.0560 lb/kbu)	PM2.5	0.0637	lb/kbu		0.806	0.808	tons/yr	0.807	0.988	0.065	0.116	See sheet: ATPA Prod Inputs for definition of terms
Gr: RTO EXH													
Gr: 002	21D501 Fiber Flash Dryer												
Gr: 004	21D301 Feed Steam Tube Dryer												
Gr: 005	21D401 Germ Steam Tube Dryer												
Gr: 006	48D101 Gluten Flash Dryer												
Unit: 001	Stack: 17; RTO (48F201/48F202) Outlet												
Process Rates	Annual grind					25.286	25.375	mmbu/yr					
Pollutants	PM EF = average of 1/10/2008, 12/12-13/2012 RTO outlet source test results (filterable only)	PM	0.0845	lb/kbu	tons/yr = (Emission Factor, lb/kbu) (mmbu/yr) (1000 kbu/mmbu) (1/2000 lb/ton)	1.068	1.072	tons/yr	1.070	1.311	0.086	0.154	PAE = BAE * (projected grind increase) EE = (PAE - BAE) * (excludable portion of grind increase); if > PAE - BAE, EE = PAE - BAE PEI = PAE - BAE - EE See sheet: ATPA Prod Inputs for definition of terms
	PM10 EF = average of above source test results (filterable + condensable)	PM10	0.9698	lb/kbu		12.261	12.304	tons/yr	12.283	15.044	0.992	1.770	
	PM2.5 = PM Filt. * Ratio. For SCC = 30200754, Ratio = 0.66092, + average condensable from above test results (0.8851 lb/kbu)	PM2.5	0.9409	lb/kbu		11.896	11.938	tons/yr	11.917	14.596	0.962	1.717	
	SO2 EF = 12/12-13/2012 RTO outlet source test result	SO2	0.8132	lb/kbu		10.281	10.317	tons/yr	10.299	12.615	0.831	1.484	
	VOC EF = average of 1/10/2008, 3/26/2008, 12/12-13/2012, 3/15/2013, 6/12/2013 RTO outlet source test results, adjusted to limit as necessary	VOC	0.8583	lb/kbu		10.851	10.889	tons/yr	10.870	13.314	0.878	1.566	
	H2SO4 EF = SO2 EF x 0.01	H2SO4	0.0081	lb/kbu		0.103	0.103	tons/yr	0.103	0.126	0.008	0.015	
Gr: 003	21B501 Fiber Flash Dryer NG Burner												
Unit: 001	Stack: 17; 21B501 SSD, Nat. Gas Combustion												
Process Rates	Measured Natural Gas Usage for 21D501 SSD Dryer (data)	Total NG for the year			mmcf/yr = (Total Natural Gas Used 21D501 (data) kcf) (1/1000 kcf/mmcf)	223.18	198.96	mmcf/yr					
					mmBtu/yr = mmcf/yr * 1020 mmBtu/mmcf	227,643	202,936	mmBtu/yr					
Pollutants	CO EF = average of 1/11/2008, 8/25-27/2009 source test results	CO	0.3222	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	36.673	32.693	tons/yr	34.683	42.286	3.010	4.593	PAE = BAE * (projected fiber increase)
	NOx EF = average of 1/11/2008, 12/11/2012 source test results	NOX	0.0658	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	7.489	6.677	tons/yr	7.083	8.636	0.615	0.938	EE = (PAE - BAE) * (excludable portion of fiber increase); if > PAE - BAE, EE = PAE - BAE PEI = PAE - BAE - EE
	PM EF = average of 1/11/2008, 8/25-27/2009, 12/11/2012 source test results (filterable only)	PM	0.0024	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	0.273	0.244	tons/yr	0.258	0.315	0.022	0.034	See sheet: ATPA Prod Inputs for definition of terms
	PM10 EF = average of above source test results (filterable + condensable)	PM10	0.0065	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	0.740	0.660	tons/yr	0.700	0.853	0.061	0.093	
	PM2.5 = PM10 * Ratio. For SCC = 30200754, Ratio = 1.000	PM2.5	0.0065	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	0.740	0.660	tons/yr	0.700	0.853	0.061	0.093	
	From AP42: SO2 = 0.6lbs/mmcf; Natural Gas Burned calc. above (Seg. 001 Process Rates)	SO2	0.6	lb/mmcf	'tons/yr = (Emission Factor, lb/mmcf) (mmcf/yr) (1/2000 lb/ton)	0.067	0.060	tons/yr	0.063	0.077	0.005	0.008	
	From AP42: VOC = 5.5lbs/mmcf; Natural Gas Burned calc. above (Seg. 001 Process Rates)	VOC	5.5	lb/mmcf	'tons/yr = (Emission Factor, lb/mmcf) (mmcf/yr) (1/2000 lb/ton)	0.614	0.547	tons/yr	0.580	0.708	0.050	0.077	
	H2SO4 EF = SO2 EF x 0.01	H2SO4	0.0060	lb/mmcf	'tons/yr = (Emission Factor, lb/mmcf) (mmcf/yr) (1/2000 lb/ton)	0.001	0.001	tons/yr	0.001	0.001	0.000	0.000	
	From 40 CFR 98 Tables C-1 & C-2, CO2e = 117.0 lb/mmBtu; Natural Gas Burned calc. above (Seg. 001 Process Rates)	GHGs	117.0	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	13,317	11,872	tons/yr	12,594	15,355	1,093	1,668	

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Unit: 002	Stack: 17; 21B501 SSD, Bio-Gas Combustion												
Process Rates	Measured Bio-Gas Usage for 21D501 SSD Dryer (data)	Total Bio-Gas / year			mmcf/yr = (Total Bio-Gas Used 21D501 (data) kcf) (1/1000 mmcf/kcf)	98.58	99.56	mmcf/yr					
					mmBtu/yr = mmcf/yr * 714 mmBtu/mmcf	70,388	71,086	mmBtu/yr					
Pollutants	CO EF = average of 1/11/2008, 8/25-27/2009 source test results	CO	0.3222	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	11.339	11.452	tons/yr	11.396	13.894	0.989	1.509	PAE = BAE * (projected fiber increase) EE = (PAE - BAE) * (excludable portion of fiber increase);
	From AP42: NOX = 100lbs/mmcf; BioGas Burned calc. above; Bio Gas: 70% btu value vs Nat. Gas	NOX	70	lb/mmcf	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	3.450	3.485	tons/yr	3.468	4.228	0.301	0.459	if > PAE - BAE, EE = PAE - BAE PEI = PAE - BAE - EE
	PM EF = average of 1/11/2008, 8/25-27/2009, 12/11/2012 source test results (filterable only)	PM	0.0024	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	0.084	0.085	tons/yr	0.085	0.103	0.007	0.011	See sheet: ATPA Prod Inputs for definition of terms
	PM10 EF = average of above source test results (filterable + condensable)	PM10	0.0065	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	0.229	0.231	tons/yr	0.230	0.280	0.020	0.030	
	PM2.5 = PM10 * Ratio. For SCC = 30200754, Ratio = 1.000	PM2.5	0.0065	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	0.229	0.231	tons/yr	0.230	0.280	0.020	0.030	
	SO2 leaving Bio Gas Scrubber (data); ratio of 21D501 flow-to-Total Biogas sent to FH	SO2	0.6	lb/mmcf	'tons/yr = (Emission Factor, lb/mmcf) (mmcf/yr) (1/2000 lb/ton)	0.030	0.030	tons/yr	0.030	0.036	0.003	0.004	
	From AP42: VOC = 5.5lbs/mmcf; BioGas Burned calc. above; Bio Gas: 70% btu value vs Nat. Gas	VOC	5.5	lb/mmcf	'tons/yr = (Emission Factor, lb/mmcf) (mmcf/yr) (1/2000 lb/ton)	0.271	0.274	tons/yr	0.272	0.332	0.024	0.036	
	H2SO4 EF = SO2 EF x 0.01	H2SO4	0.0060	lb/mmcf	'tons/yr = (Emission Factor, lb/mmcf) (mmcf/yr) (1/2000 lb/ton)	0.000	0.000	tons/yr	0.000	0.000	0.000	0.000	
	From 40 CFR 98 Tables C-1 & C-2, CO2e = 115.4 lb/mmBtu; BioGas Burned calc. above	GHGs	115.4	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	4,061	4,102	tons/yr	4,082	4,976	354	541	
Gr: 006	**48D101 Gluten Flash Dryer**												
Unit: 002	Stack: 17; 48B101 Gluten Dryer, N-G Combustion												
Process Rates	Measured Natural Gas Usage for 48D101 Gluten Dryer (data)	Total NG for the year			mmcf/yr = (Total Natural Gas Used 48D101 (data) kcf) (1/1000 mmcf/kcf)	65.09	55.96	mmcf/yr					
					mmBtu/yr = mmcf/yr * 1020 mmBtu/mmcf	66,389	57,079	mmBtu/yr					
Pollutants	From AP42: CO = 84 lbs/mmcf; Natural Gas Burned calc. above (Seg. 002 Process Rates)	CO	84	lb/mmcf	tons/yr = (Emission Factor, lb/mmcf) (mmcf/yr) (1/2000 lb/ton)	2.734	2.350	tons/yr	2.542	3.132	0.150	0.440	PAE = BAE * (projected gluten increase) EE = (PAE - BAE) * (excludable portion of gluten
	From AP42: NOX = 100 lbs/mmcf; Natural Gas Burned calc. above (Seg. 002 Process Rates)	NOX	100	lb/mmcf	tons/yr = (Emission Factor, lb/mmcf) (mmcf/yr) (1/2000 lb/ton)	3.254	2.798	tons/yr	3.026	3.729	0.179	0.523	increase); if > PAE - BAE, EE = PAE - BAE PEI = PAE - BAE - EE
	From 40 CFR 98 Tables C-1 & C-2, CO2e = 117.0 lb/mmBtu; Natural Gas Burned calc. above (Seg. 002 Process Rates)	GHGs	117.0	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	3,884	3,339	tons/yr	3,611	4,450	214	625	See sheet: ATPA Prod Inputs for definition of terms
Unit: 003	Stack: 17; 48B101 Gluten, Bio-Gas Combustion												
Process Rates	Measured Bio-Gas Usage for 48D101 Gluten Dryer (data)	Total Bio-Gas / year			mmcf/yr = (Total Bio-Gas Used 48D101 (data) kcf) (1/1000 kcf/mmcf)	52.21	68.50	mmcf/yr					
					mmBtu/yr = mmcf/yr * 1020 mmBtu/mmcf * 0.7	37,278	48,913	mmBtu/yr					
Pollutants	From AP42: CO = 84 lbs/mmcf; BioGas Burned calc. above; Bio Gas: 70% btu value vs Nat. Gas	CO	58.8	lb/mmcf	tons/yr = (Emission Factor, lb/mmcf) (mmcf/yr) (1/2000 lb/ton)	1.535	2.014	tons/yr	1.775	2.186	0.105	0.307	PAE = BAE * (projected gluten increase) EE = (PAE - BAE) * (excludable portion of gluten
	From AP42: NOX = 100 lbs/mmcf; BioGas Burned calc. above; Bio Gas: 70% btu value vs Nat. Gas	NOX	70.0	lb/mmcf	tons/yr = (Emission Factor, lb/mmcf) (mmcf/yr) (1/2000 lb/ton)	1.8273	2.3977	tons/yr	2.113	2.603	0.125	0.365	increase); if > PAE - BAE, EE = PAE - BAE PEI = PAE - BAE - EE
	From 40 CFR 98 Tables C-1 & C-2, CO2e = 115.4 lb/mmBtu; BioGas Burned calc. above	GHGs	115.4	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	2,151	2,822	tons/yr	2,487	3,064	147	430	See sheet: ATPA Prod Inputs for definition of terms
Gr: 007	**48F201 RTO #1 Burner**												
Unit: 001	Stack: 17; 48B201 RTO Nat. Gas Combustion												
Process Rates	Measured Gas Usage for 48F201 RTO #1 (data)	Total NG for the year			mmcf/yr = (Total Gas Used 48F201 (data) kcf) (1/1000 kcf/mmcf)	17.66	14.97	mmcf/yr					
					mmBtu/yr = mmcf/yr * 1020 mmBtu/mmcf	18,008	15,269	mmBtu/yr					
Pollutants	From AP42: CO = 84 lbs/mmcf; Natural Gas Burned calc. above (Seg. 002 Process Rates)	CO	84	lb/mmcf	tons/yr = (Emission Factor, lb/mmcf) (mmcf/yr) (1/2000 lb/ton)	0.742	0.629	tons/yr	0.685	0.839	0.055	0.099	PAE = BAE * (projected grind increase) EE = (PAE - BAE) * (excludable portion of grind
	From AP42: NOX = 100 lbs/mmcf; Natural Gas Burned calc. above (Seg. 002 Process Rates)	NOX	100	lb/mmcf	tons/yr = (Emission Factor, lb/mmcf) (mmcf/yr) (1/2000 lb/ton)	0.883	0.748	tons/yr	0.816	0.999	0.066	0.118	increase); if > PAE - BAE, EE = PAE - BAE PEI = PAE - BAE - EE
	From 40 CFR 98 Tables C-1 & C-2, CO2e = 117.0 lb/mmBtu; Natural Gas Burned calc. above (Seg. 002 Process Rates)	GHGs	117.0	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	1,053	893	tons/yr	973	1,192	79	140	See sheet: ATPA Prod Inputs for definition of terms
Gr: 008	**48F202 RTO #2 Burner**												
Unit: 001	Stack: 17; 48B202 RTO Nat. Gas Combustion												
Process Rates	Measured Gas Usage for 48F202 RTO #2 (data)	Total NG for the year			mmcf/yr = (Total Gas Used 48F202 (data) kcf) (1/1000 kcf/mmcf)	17.66	14.97	mmcf/yr					
					mmBtu/yr = mmcf/yr * 1020 mmBtu/mmcf	18,008	15,269	mmBtu/yr					
Pollutants	From AP42: CO = 84 lbs/mmcf; Natural Gas Burned calc. above (Seg. 002 Process Rates)	CO	84	lb/mmcf	tons/yr = (Emission Factor, lb/mmcf) (mmcf/yr) (1/2000 lb/ton)	0.742	0.629	tons/yr	0.685	0.908	0.080	0.143	PAE = BAE * (projected grind increase) EE = (PAE - BAE) * (excludable portion of grind
	From AP42: NOX = 100 lbs/mmcf; Natural Gas Burned calc. above (Seg. 002 Process Rates)	NOX	100	lb/mmcf	tons/yr = (Emission Factor, lb/mmcf) (mmcf/yr) (1/2000 lb/ton)	0.883	0.748	tons/yr	0.816	1.081	0.095	0.170	increase); if > PAE - BAE, EE = PAE - BAE PEI = PAE - BAE - EE
	From 40 CFR 98 Tables C-1 & C-2, CO2e = 117.0 lb/mmBtu; Natural Gas Burned calc. above (Seg. 002 Process Rates)	GHGs	117.0	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	1,053	893	tons/yr	973	1,290	114	203	See sheet: ATPA Prod Inputs for definition of terms

Company Name: Tate & Lyle Ingredients Americas LLC
Address City IN Zip: 2245 North Sagamore Parkway, Lafayette, IN 47904
Significant Source Mod No.: 157-34094-00003
Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

Operating Hours	48D101 hours of operation.	hrs/yr			hrs/yr = (48D101 Meal Dryer Operating hours hrs/yr)	8,321	8,378	hrs/yr					
Unit: 001 Process Rates	Stack: 145; 21F36 Meal Transfer Baghouse Total scf of AIR through this Pollution Control Device (PM_Data)	Total scf for the year			mmcf/yr = (9,778 scfm) (60min/hr) (Operating hrs/yr) (1/1E06 cf/mmcf)	4,882	4,915	mmscf/yr					
Pollutants	9,778 scfm; 0.01 gr/scf (PM_Data)	PM	0.01	gr/scf	tons/yr = (9,778 scfm) (0.01/7000 lbs/scf) (1/2000 lb/ton) (60 min/hr) (Operating hrs/yr)	3.487	3.511	tons/yr	3.499	4.311	0.207	0.605	PAE = BAE * (projected gluten increase) EE = (PAE - BAE) * (excludable portion of gluten
	9,778 scfm; 0.01 gr/scf (PM_Data)	PM10	0.01	gr/scf	tons/yr = (9,778 scfm) (0.01/7000lbs/scf) (1/2000 lb/ton) (60 min/hr) (Operating hrs/yr)	3.487	3.511	tons/yr	3.499	4.311	0.207	0.605	increase); if > PAE - BAE, EE = PAE - BAE PEI = PAE - BAE - EE
	PM2.5 = PM10 * Ratio. For SCC = 30200756, Ratio = 0.54762	PM2.5	0.0055	gr/scf	tons/yr = (PM10 tons/yr, see above) (PM2.5/PM10 ratio from PM_Data sheet)	1.910	1.923	tons/yr	1.916	2.361	0.113	0.331	See sheet: ATPA Prod Inputs for definition of terms
Gr: 019 Operating Hours	**8V62 Meal Bin** Operating hours = 1/2 of 48D101 Meal Dryer operating hours (2 bins)	hrs/yr			hrs/yr = 1/2 (48D101 Operating hrs/yr)	4,161	4,189	hrs/yr					
Unit: 001 Process Rates	Stack: 114; 8F62 Meal Bin Vent Total scf of AIR through this Pollution Control Device (PM_Data)	Total scf for the year			mmcf/yr = (1,920 scfm) (60min/hr) (Operating hrs/yr) (1/1E06 cf/mmcf)	479.3	482.6	mmscf/yr					
Pollutants	1,920 scfm; 0.005 gr/scf (PM_Data)	PM	0.005	gr/scf	tons/yr = (1,920 scfm) (0.005/7000 lbs/scf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	0.171	0.172	tons/yr	0.172	0.212	0.010	0.030	PAE = BAE * (projected gluten increase) EE = (PAE - BAE) * (excludable portion of gluten
	1,920 scfm; 0.005 gr/scf (PM_Data)	PM10	0.005	gr/scf	tons/yr = (1,920 scfm) (0.005/7000 lbs/scf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	0.171	0.172	tons/yr	0.172	0.212	0.010	0.030	increase); if > PAE - BAE, EE = PAE - BAE PEI = PAE - BAE - EE See sheet: ATPA Prod Inputs for definition of terms
	PM2.5 = PM10 * Ratio. For SCC = 30200756, Ratio = 0.54762	PM2.5	0.0027	gr/scf	tons/yr = (PM10 tons/yr, see above) (PM2.5/PM10 ratio from PM_Data sheet)	0.094	0.094	tons/yr	0.094	0.116	0.006	0.016	
Gr: 020 Operating Hours	**8V63 Meal Bin** Operating hours = 1/2 of 48D101 Meal Dryer operating hours (2 bins)	hrs/yr			hrs/yr = 1/2 (48D101 Operating hrs/yr)	4,161	4,189	hrs/yr					
Unit: 001 Process Rates	Stack: 115; 8F63 Meal Bin Vent Total scf of AIR through this Pollution Control Device (PM_Data)	Total scf for the year			mmcf/yr = (1,920 scfm) (60min/hr) (Operating hrs/yr) (1/1E06 cf/mmcf)	479.3	482.6	mmscf/yr					
Pollutants	1,920 scfm; 0.005 gr/scf (PM_Data)	PM	0.005	gr/scf	tons/yr = (1,920 scfm) (0.005/7000 lbs/scf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	0.171	0.172	tons/yr	0.172	0.212	0.010	0.030	PAE = BAE * (projected gluten increase) +O174; if > PAE - BAE, EE = PAE - BAE
	1,920 scfm; 0.005 gr/scf (PM_Data)	PM10	0.005	gr/scf	tons/yr = (1,920 scfm) (0.005/7000 lbs/scf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	0.171	0.172	tons/yr	0.172	0.212	0.010	0.030	PEI = PAE - BAE - EE See sheet: ATPA Prod Inputs for definition of terms
	PM2.5 = PM10 * Ratio. For SCC = 30200756, Ratio = 0.54762	PM2.5	0.0027	gr/scf	tons/yr = (PM10 tons/yr, see above) (PM2.5/PM10 ratio from PM_Data sheet)	0.094	0.094	tons/yr	0.094	0.116	0.006	0.016	
Gr: 021 Operating Hours	**8V53 Germ Bin** Operating hours = 1/2 of 21D401 Germ Dryer operating hours (2 bins)	hrs/yr			hrs/yr = 1/2 (21D401 Germ Dryer Operating hrs/yr)	4,295	4,290	hrs/yr					
Unit: 001 Process Rates	Stack: 116; 8F53 Germ Bin Vent Total scf of AIR through this Pollution Control Device (PM_Data)	Total scf for the year			mmcf/yr = (1,920 scfm) (60min/hr) (Operating hrs/yr) (1/1E06 cf/mmcf)	494.8	494.2	mmscf/yr					
Pollutants	1,920 scfm; 0.005 gr/scf (PM_Data)	PM	0.005	gr/scf	tons/yr = (1,920 scfm) (0.005/7000 lbs/scf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	0.177	0.177	tons/yr	0.177	0.216	0.014	0.025	PAE = BAE * (projected germ increase) EE = (PAE - BAE) * (excludable portion of germ
	1,920 scfm; 0.005 gr/scf (PM_Data)	PM10	0.005	gr/scf	tons/yr = (1,920 scfm) (0.005/7000 lbs/scf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	0.177	0.177	tons/yr	0.177	0.216	0.014	0.025	increase); if > PAE - BAE, EE = PAE - BAE PEI = PAE - BAE - EE See sheet: ATPA Prod Inputs for definition of terms
	PM2.5 = PM10 * Ratio. For SCC = 30200756, Ratio = 0.54762	PM2.5	0.0027	gr/scf	tons/yr = (PM10 tons/yr, see above) (PM2.5/PM10 ratio from PM_Data sheet)	0.097	0.097	tons/yr	0.097	0.118	0.008	0.014	

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Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

Operating Hours	Operates 23hrs/day, 7 days/wk, 52 wks/yr	hrs/yr			hrs/yr = (23 hrs/day) (7 days/wk) (52wks/yr)	8,372	8,372	hrs/yr					
Unit: 001	Stack: 125; 12F39 Co-Product Transfer Cltr												
Process Rates	Total scf of AIR through this Pollution Control Device (PM_Data)	Total scf for the year			mmcf/yr = (2,444 scfm) (60min/hr) (Operating hrs/yr) (1/1E06 cf/mmcf)	1,227.7	1,227.7	mmscf/yr					
Pollutants	2,444 scfm; 0.01 gr/scf (PM_Data)	PM	0.01	gr/scf	tons/yr = (2,444 scfm) (0.01/7000 lbs/scf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	0.877	0.877	tons/yr	0.877	1.074	0.071	0.126	PAE = BAE * (projected grind increase) EE = (PAE - BAE) * (excludable portion of grind increase); if > PAE - BAE, EE = PAE - BAE PEI = PAE - BAE - EE See sheet: ATPA Prod Inputs for definition of terms
	2,444 scfm; 0.01 gr/scf (PM_Data)	PM10	0.01	gr/scf	tons/yr = (2,444 scfm) (0.01/7000 lbs/scf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	0.877	0.877	tons/yr	0.877	1.074	0.071	0.126	
	PM2.5 = PM10 * Ratio. For SCC = 30200756, Ratio = 0.54762	PM2.5	0.0055	gr/scf	tons/yr = (PM10 tons/yr, see above) (PM2.5/PM10 ratio from PM_Data sheet)	0.480	0.480	tons/yr	0.480	0.588	0.039	0.069	
Gr: 024	**12C40 Rail Loadout Aspiration**												
Operating Hours	Operates 23hrs/day, 7 days/wk, 52 wks/yr	hrs/yr			hrs/yr = (23 hrs/day) (7 days/wk) (52wks/yr)	8,372	8,372	hrs/yr					
Unit: 001	Stack: 3; 12F40 Rail Loadout Dust Collector												
Process Rates	Total scf of AIR through this Pollution Control Device (PM_Data)	Total scf for the year			mmcf/yr = (5,867 scfm) (60min/hr) (Operating hrs/yr) (1/1E06 cf/mmcf)	2,947	2,947	mmscf/yr					
Pollutants	5,867 scfm; 0.01 gr/scf (PM_Data)	PM	0.01	gr/scf	tons/yr = (5,867 scfm) (0.1/7000 lbs/scf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	2.105	2.105	tons/yr	2.105	2.203	0.000	0.098	PTE = BAE * (8760 hrs/yr / actual avg. hrs/yr) PEI = PTE - BAE
	5,867 scfm; 0.01 gr/scf (PM_Data)	PM10	0.01	gr/scf	tons/yr = (5,867 scfm) (0.01/7000 lbs/scf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	2.105	2.105	tons/yr	2.105	2.203	0.000	0.098	
	PM2.5 = PM10 * Ratio. For SCC = 30200756, Ratio = 0.54762	PM2.5	0.0055	gr/scf	tons/yr = (PM10 tons/yr, see above) (PM2.5/PM10 ratio from PM_Data sheet)	1.153	1.153	tons/yr	1.153	1.206	0.000	0.053	
Gr: 026	**Steep, Mill & Feed house SO2 Ventilation**												
Unit: 001	Stack: 17; 15F401 Millhse Aspir Wet Scrubber												
Process Rates	Annual grind					25.286	25.375	mmbu/yr					
Pollutants	SO2 EF = average of 3/27/2008, 3/20/2013 scrubber outlet source test results	SO2	0.187	lb/kbu	tons/yr = (Emission Factor, lb/kbu) (mmbu/yr) (1000 kbu/mmbu) (1/2000 lb/ton)	2.359	2.367	tons/yr	2.363	2.895	0.191	0.341	SO2 PAE = BAE * (projected grind increase) VOC PAE = allowable (27 lb/hr) * (8760 hrs/yr) / 2000 lb/ton EE = CHA production (mmbu/yr) * (1000 kbu/mmbu) * (BAE emission factor, lb/kbu) / (2000 lb/ton) - BAE PEI = PAE - BAE - EE See sheet: ATPA Prod Inputs for definition of terms
	VOC EF = average of 3/27/2008, 3/20/2013 scrubber outlet source test results	VOC	8.485	lb/kbu	tons/yr = (Emission Factor, lb/kbu) (mmbu/yr) (1000 kbu/mmbu) (1/2000 lb/ton)	107.269	107.645	tons/yr	107.457	118.260	8.674	2.128	
Gr: 031	**9V31 Filter-Aid Silo**												
Operating Hours	Greater of 1) Total Usage (lb/yr) (data)/ Title V Unload Rate (lb/hr) or 2) 8 hrs/wk, 52wks/yr = 416 hrs/yr	hrs/yr			hrs/yr = Max: 1) (Total Filter-Aid Usage lb/yr) / (10,000 lb/hr) or 2) (8 hrs/wk) (52wks/yr)	416	416	hrs/yr					
Unit: 001	Stack: 123; 9F31 Filter-Aid Silo Bin Vent												
Process Rates	Total acf of AIR through this Pollution Control Device (PM_Data)	Total acf for the year			mmcf/yr = (350 acfm) (60min/hr) (Operating hrs/yr) (1/1E06 cf/mmcf)	8.736	8.736	mmacf/yr					
Pollutants	350 acfm; 0.01 gr/acf (PM_Data)	PM	0.01	gr/acf	tons/yr = (350 acfm) (0.01/7000 lbs/acf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	0.006	0.006	tons/yr	0.006	0.009	0.000	0.003	PAE = BAE * 1.5 (50% increase projected) No emissions excluded PEI = PAE - BAE
	350 acfm; 0.01 gr/acf (PM_Data)	PM10	0.01	gr/acf	tons/yr = (350 acfm) (0.01/7000 lbs/acf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	0.006	0.006	tons/yr	0.006	0.009	0.000	0.003	
	PM2.5 = PM10 * Ratio. For SCC = 30200756, Ratio = 0.72581	PM2.5	0.0073	gr/acf	tons/yr = (PM10 tons/yr, see above) (PM2.5/PM10 ratio from PM_Data sheet)	0.005	0.005	tons/yr	0.005	0.007	0.000	0.002	

Appendix A: Emissions Calculations
Tate & Lyle, Sagamore

Company Name: Tate & Lyle Ingredients Americas LLC
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Significant Source Mod No.: 157-34094-00003
Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

Gr: 032	**18C18 Filter-Aid Transfer**												
Operating Hours	Greater of 1) Total Usage (lb/yr) (data)/ Title V Unload Rate (lb/hr) or 2) 3 hrs/day, 6 days/wk, 52 wks/yr = 936 hrs/yr	hrs/yr			hrs/yr = Max: 1) (Total Filter-Aid Usage lb/yr) / (5,000 lb/hr) or 2) (3 hrs/day) (6 days/wk) (52wks/yr)	936	936	hrs/yr					
Unit: 001	Stack: 129; 18F118 Filter-Aid Receiver												
Process Rates	Total acf of AIR through this Pollution Control Device (PM_Data)	Total acf for the year			mmcf/yr = (350 acfm) (60min/hr) (Operating hrs/yr) (1/1E06 cf/mmcf)	19.656	19.656	mmacf/yr					
Pollutants	350 acfm; 0.01 gr/acf (PM_Data)	PM	0.01	gr/acf	tons/yr = (350 acfm) (0.01/7000 lbs/acf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	0.014	0.014	tons/yr	0.014	0.021	0.000	0.007	PAE = BAE * 1.5 (50% increase projected) No emissions excluded PEI = PAE - BAE
	350 acfm; 0.01 gr/acf (PM_Data)	PM10	0.01	gr/acf	tons/yr = (350 acfm) (0.01/7000 lbs/acf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	0.014	0.014	tons/yr	0.014	0.021	0.000	0.007	
	PM2.5 = PM10 * Ratio. For SCC = 30200756, Ratio = 0.72581	PM2.5	0.0073	gr/acf	tons/yr = (PM10 tons/yr, see above) (PM2.5/PM10 ratio from PM_Data sheet)	0.010	0.010	tons/yr	0.010	0.015	0.000	0.005	
Gr: 033	**9V144 Soda Ash Storage Tank**												
Operating Hours	Greater of 1) Total Usage (lb/yr) (data)/ Title V Unload Rate (lb/hr) or 2) 6 hrs/day, 3days/wk, 52 wks/yr = 936 hrs/yr	hrs/yr			hrs/yr = Max: 1) (Total Soda Ash Usage lb/yr) / (11,875 lb/hr) or 2) (6 hrs/day) (3days/wk) (52wks/yr)	936	936	hrs/yr					
Unit: 001	Stack: 149; 9E1 Soda Ash Transfer Eductor												
Process Rates	Total acf of AIR through this Pollution Control Device (PM_Data)	Total acf for the year			mmcf/yr = (1,550 acfm) (60min/hr) (Operating hrs/yr) (1/1E06 cf/mmcf)	87.048	87.048	mmacf/yr					
Pollutants	1550 acfm; 0.02 gr/acf (PM_Data)	PM	0.02	gr/acf	tons/yr = (1,550 acfm) (0.02/7000 lbs/acf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	0.124	0.124	tons/yr	0.124	0.137	0.000	0.012	PAE = BAE * 1.10 (10% increase projected) No emissions excluded PEI = PAE - BAE
	1550 acfm; 0.02 gr/acf (PM_Data)	PM10	0.02	gr/acf	tons/yr = (1,550 acfm) (0.02/7000 lbs/acf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	0.124	0.124	tons/yr	0.124	0.137	0.000	0.012	
	PM2.5 = PM10 * Ratio. For SCC = 30200756, Ratio = 0.77055	PM2.5	0.0154	gr/acf	tons/yr = (PM10 tons/yr, see above) (PM2.5/PM10 ratio from PM_Data sheet)	0.096	0.096	tons/yr	0.096	0.105	0.000	0.010	
Gr: 034	**9C30 Carbon Unloading to Silo**												
Operating Hours	Total Usage (lb/yr) (data)/ Title V Unload Rate (lb/hr)	hrs/yr			hrs/yr = Total Powdered Carbon Usage (lb/yr) / (13,333 lb/hr)	72	65	hrs/yr					
Unit: 001	Stack: 124; 9F30 Bin Vent Filter												
Process Rates	Total acf of AIR through this Pollution Control Device (PM_Data)	Total acf for the year			mmcf/yr = (350 acfm) (60min/hr) (Operating hrs/yr) (1/1E06 cf/mmcf)	1.509	1.365	mmacf/yr					
Pollutants	BAE = 350 acfm; 0.01 gr/acf (PM_Data); PAE = 700 acfm; 0.005 gr/acf	PM	0.01	gr/acf	tons/yr = (350 acfm) (0.01/7000 lbs/acf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	0.001	0.001	tons/yr	0.001	0.002	0.000	0.001	PAE = BAE * (700/350) * (0.005/0.01) * 1.5 (50% increase projected) No emissions excluded PEI = PAE - BAE
	BAE = 350 acfm; 0.01 gr/acf (PM_Data); PAE = 700 acfm; 0.005 gr/acf	PM10	0.01	gr/acf	tons/yr = (350 acfm) (0.01/7000 lbs/acf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	0.001	0.001	tons/yr	0.001	0.002	0.000	0.001	
	PM2.5 = PM10 * Ratio. For SCC = 30200756, Ratio = 0.72581	PM2.5	0.0073	gr/acf	tons/yr = (PM10 tons/yr, see above) (PM2.5/PM10 ratio from PM_Data sheet)	0.001	0.001	tons/yr	0.001	0.001	0.000	0.000	
Gr: 037	**45V250 Sodium Sulfate Bin**												
Operating Hours	Total Usage (lb/yr) (data)/ Title V Unload Rate (lb/hr)	hrs/yr			hrs/yr = (Total Sodium Sulfate Usage lb/yr) / (19,000 lb/hr)	2,033	1,886	hrs/yr					
Unit: 001	Stack: 64; 45F25 Sodium Sulfate Bin Vent												
Process Rates	Total acf of AIR through this Pollution Control Device (PM_Data)	Total acf for the year			mmcf/yr = (1,500 acfm) (60min/hr) (Operating hrs/yr) (1/1E06 cf/mmcf)	182.937	169.740	mmacf/yr					
Pollutants	1500 acfm; 0.01 gr/acf (PM_Data)	PM	0.01	gr/acf	tons/yr = (1500 acfm) (0.01/7000 lbs/acf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	0.131	0.121	tons/yr	0.126	0.145	0.000	0.019	PAE = BAE * 1.15 (15% increase projected) No emissions excluded PEI = PAE - BAE
	1500 acfm; 0.01 gr/acf (PM_Data)	PM10	0.01	gr/acf	tons/yr = (1500 acfm) (0.01/7000 lbs/acf) (1/2000 lb/ton) (60min/hr) (Operating hrs/yr)	0.131	0.121	tons/yr	0.126	0.145	0.000	0.019	
	PM2.5 = PM10 * Ratio. For SCC = 30200756, Ratio = 0.72581	PM2.5	0.0073	gr/acf	tons/yr = (PM10 tons/yr, see above) (PM2.5/PM10 ratio from PM_Data sheet)	0.095	0.088	tons/yr	0.091	0.105	0.000	0.014	
Calculate Boiler Steam Demand									Production based, not emissions				
Gr: 102	**31B1 CoGen Boiler (coal)**					1,379,066	1,594,301	mmBtu/yr	1,486,684	1,933,576	127,437	227,479	Projected mmBtu/yr = (baseline actual mmBtu/yr) * (projected grind increase) Excludable mmBtu/yr = (projected mmBtu/yr - baseline mmBtu/yr) * (excludable grind increase)
Gr: 102	**31B1 CoGen Boiler (gas)**					144,684	39,267	mmBtu/yr	91,975				
Gr: 096	**11B1 Gas Boiler**					34,364	22,815	mmBtu/yr	28,590				
Gr: 097	**11B2 Gas Boiler**					34,364	22,815	mmBtu/yr	28,590	105,051.3	6,924	12,359	
Gr: 098	**11B3 Gas Boiler**					34,364	22,815	mmBtu/yr	28,590				
Total	**Boiler Heat Input**					1,626,842	1,702,013	mmBtu/yr	1,664,428	2,038,627	134,361	239,838	
Total	**mmBtu/kbu**					64.338	67.076	mmBtu/kbu	65.707				
Assign Increase to: 1) CoGen Boiler (31B1) - assume 90% capacity factor, 2) Gas boiler group (11B1, 2, 3) - remainder													

Appendix A: Emissions Calculations
Tate & Lyle, Sagamore

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Address City IN Zip: 2245 North Sagamore Parkway, Lafayette, IN 47904
Significant Source Mod No.: 157-34094-00003
Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

Gr: 102	31B1 CoGen Boiler - BAE												
Unit: 001	Stack: 202; 31B1 CoGen Boiler (Coal)												
Process Rates	Total Coal Burned	tons/yr			tons/yr = (Total Boiler Coal Burned tons/yr)	61,912	71,467	tons/yr					
		mmBtu/yr			Calculated based on monthly avg. coal HHV	1,379,066	1,594,301	mmBtu/yr	1,486,684				
Pollutants: BAE	PM EF: Average of Airtech Test Report 2824 (10/08), 3045B (9/09) & 4315B (10/13)	PM	0.0257	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	17.721	20.487	tons/yr	19.104				
	PM10 EF: PM EF + condensable PM from Airtech Test Report 3045B (9/09)	PM10	0.0848	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	58.472	67.598	tons/yr	63.035				
	PM2.5 EF: Airtech Test Report 3045B (9/09); filterable + condensable	PM2.5	0.0719	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	49.577	57.315	tons/yr	53.446				
	SO2 Emissions: CEMS Data (see Sheet: Coal Blr Op Data)	SO2			CEMS Data (see Sheet: Coal Blr Op Data)	344.517	409.402	tons/yr	376.959				
	NOx Emissions: CEMS Data (see Sheet: Coal Blr Op Data)	NOX			CEMS Data (see Sheet: Coal Blr Op Data)	250.488	304.845	tons/yr	277.667				
	CO EF: Airtech Test Report 3045B (9/09)	CO	0.0062	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	4.275	4.942	tons/yr	4.609				
	VOC EF: AP-42, Table 1.1-19 (9/98)	VOC	0.06	lb/ton	'tons/yr = (Emission Factor, lb/ton) (tons/yr) (1/2000 lb/ton)	1.857	2.144	tons/yr	2.001				
	H2SO4 Emissions: Calculated as 1% of SO2	H2SO4			tons/yr = (SO2 emissions) (0.01)	3.445	4.094	tons/yr	3.770				
	F EF: Airtech Test Report 3045B (9/09)	F	2.71E-04	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	0.187	0.216	tons/yr	0.201				
	Pb EF: Airtech Test Report 3045B (9/09)	Pb	1.91E-06	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	0.001	0.002	tons/yr	0.001				
	GHG (CO2e) EF: 40 CFR 98 Subpart C, Tables C-1 and C-2	GHGs	207.5	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	143,087	165,419	tons/yr	154,253				
Unit: 002	Stack: 202; 31B1 CoGen Boiler (Gas)												
Process Rates	Total Gas Burned mmcf/yr (data)	Total NG for the year			mmcf/yr = (Total Boiler Gas Burned kcf/yr) (1/1000mmcf/kcf)	141.847	38.497	mmcf/yr					
					mmBtu/yr = (mmcf/yr) (1020 mmBtu/mmcf)	144,684	39,267	mmBtu/yr					
Pollutants: BAE	From AP42: PM = 1.9 lbs/mmcf; Natural Gas Burned calc. above (Seg. 002 Process Rates)	PM	1.9	lb/mmscf	tons/yr = (Emission Factor, lb/mmscf) (mmscf/yr) (1/2000 lb/ton)	0.135	0.037	tons/yr	0.086				
	From AP42: PM10 = 7.6 lbs/mmcf; Natural Gas Burned calc. above (Seg. 002 Process Rates)	PM10	7.6	lb/mmscf	tons/yr = (Emission Factor, lb/mmscf) (mmscf/yr) (1/2000 lb/ton)	0.539	0.146	tons/yr	0.343				
	From AP42: PM2.5 = 7.6 lbs/mmcf; Natural Gas Burned calc. above (Seg. 002 Process Rates)	PM2.5	7.6	lb/mmscf	tons/yr = (Emission Factor, lb/mmscf) (mmscf/yr) (1/2000 lb/ton)	0.539	0.146	tons/yr	0.343				
	Included in CEMS data above	SO2			Included in CEMS data above								
	Included in CEMS data above	NOX			Included in CEMS data above								
	From AP42: CO = 84lbs/mmcf; Natural Gas Burned calc. above (Seg. 002 Process Rates)	CO	84	lb/mmscf	tons/yr = (Emission Factor, lb/mmscf) (mmscf/yr) (1/2000 lb/ton)	5.958	1.617	tons/yr	3.787				
	From AP42: VOC = 5.5lbs/mmcf; Natural Gas Burned calc. above (Seg. 002 Process Rates)	VOC	5.5	lb/mmscf	tons/yr = (Emission Factor, lb/mmscf) (mmscf/yr) (1/2000 lb/ton)	0.390	0.106	tons/yr	0.248				
	H2SO4 Emissions: Calculated as 1% of SO2	H2SO4			Based on SO2 CEMS data, included in coal (Unit: 001) emissions above								
	Pollutant not emitted from natural gas combustion	F	0.00	lb/mmBtu		0.000	0.000	tons/yr	0.000				
	Pollutant not emitted from natural gas combustion	Pb	0.00	lb/mmBtu		0.000	0.000	tons/yr	0.000				
	GHG (CO2e) EF: 40 CFR 98 Subpart C, Tables C-1 and C-2	GHGs	117.0	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	8,464	2,297	tons/yr	5,380.7				
Gr: 102	31B1 CoGen Boiler - PAE												
Unit: 002	Stack: 202; 31B1 CoGen Boiler (Gas)								Production based, not emissions				
Process Rates	Projected Gas Rate mmBtu/yr	Total NG for the year			**PAE Calculation Text**				1,578,659	1,933,576	127,437	227,479	Projected boiler heat input (from above) = 220.7 mmBtu/hr (annual average) = 96% capacity factor
Pollutants: PAE	From AP42: PM = 1.9 lbs/mmcf; 1020 Btu/scf	PM	0.0019	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)			↓ Sum BAE from above ↓	19.190	1.801	0.000	0.000	PAE = PAE EF (lb/mmBtu) * projected heat input (mmBtu/yr) / (2000 lb/ton) No emissions excluded PEI = PAE - BAE
	From AP42: PM10 = 7.6 lbs/mmcf; 1020 Btu/scf	PM10	0.0075	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)				63.378	7.204	0.000	0.000	
	From AP42: PM2.5 = 7.6 lbs/mmcf; 1020 Btu/scf	PM2.5	0.0075	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)				53.789	7.204	0.000	0.000	
	From AP42: SO2 = 0.6lbs/mmcf; 1020 Btu/scf	SO2	0.0006	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)				376.959	0.569	0.000	0.000	
	Burner vendor specification	NOX	0.1	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)				277.667	96.679	0.000	0.000	
	Burner vendor specification	CO	0.07	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)				8.396	67.675	0.000	59.279	
	From AP42: VOC = 5.5lbs/mmcf; 1020 Btu/scf	VOC	0.0054	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)				2.249	5.213	0.000	2.964	
	H2SO4 Emissions: Calculated as 1% of SO2	H2SO4	5.88E-06	lb/mmBtu	tons/yr = (SO2 emissions) (0.01)				3.770	0.006	0.000	0.000	
	Pollutant not emitted from natural gas combustion	F	0.00	lb/mmBtu					0.201	0.000	0.000	0.000	
	Pollutant not emitted from natural gas combustion	Pb	0.00	lb/mmBtu					0.001	0.000	0.000	0.000	
	GHG (CO2e) EF: 40 CFR 98 Subpart C, Tables C-1 and C-2	GHGs	117.0	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)				159,633	113,117	0.000	0.000	

Appendix A: Emissions Calculations
Tate & Lyle, Sagamore

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Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

Gr: 102	11B1, 11B2, 11B3 - Gas Boiler Group												Projected mmBtu/yr = (baseline actual mmBtu/yr) * (projected grind increase) Excludable mmBtu/yr = (projected mmBtu/yr - baseline mmBtu/yr) * (excludable grind increase)
Process Rates	Stack: 197; 11B1, 11B2, 11B3 Heat input (MMBtu/yr)	Heat input				103,092	68,445	mmBtu/yr	85,769	105,051	6,924	12,359	
Pollutants	From AP42: PM = 1.9 lbs/mmcf; 1020 Btu/scf	PM	0.0019	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	0.096	0.064	tons/yr	0.080	0.098	0.006	0.012	PAE = PAE EF (lb/mmBtu) * projected heat input (mmBtu/yr) / (2000 lb/ton) EE = (PAE - BAE) * excludable portion of projected increase in heat input PEI = PAE - BAE - EE
	From AP42: PM10 = 7.6 lbs/mmcf; 1020 Btu/scf	PM10	0.0075	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	0.384	0.255	tons/yr	0.320	0.391	0.026	0.046	
	From AP42: PM2.5 = 7.6 lbs/mmcf; 1020 Btu/scf	PM2.5	0.0075	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	0.384	0.255	tons/yr	0.320	0.391	0.026	0.046	
	From AP42: SO2 = 0.6lbs/mmcf; 1020 Btu/scf	SO2	0.0006	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	0.030	0.020	tons/yr	0.025	0.031	0.002	0.004	
	From AP42: NOX = 280/mmcf; 1020 Btu/scf	NOX	0.2745	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	14.150	9.394	tons/yr	11.772	14.419	0.950	1.696	
	From AP42: CO = 84/mmcf; 1020 Btu/scf	CO	0.0824	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	4.245	2.818	tons/yr	3.532	4.326	0.285	0.509	
	From AP42: VOC = 5.5lbs/mmcf; 1020 Btu/scf	VOC	0.0054	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	0.278	0.185	tons/yr	0.231	0.283	0.019	0.033	
	H2SO4 Emissions: Calculated as 1% of SO2	H2SO4	5.88E-06	lb/mmBtu	tons/yr = (SO2 emissions) (0.01)	0.000	0.000	tons/yr	0.000	0.000	0.000	0.000	
	GHG (CO2e) EF: 40 CFR 98 Subpart C, Tables C-1 and C-2	GHGs	117.0	lb/mmBtu	tons/yr = (Emission Factor, lb/mmBtu) (mmBtu/yr) (1/2000 lb/ton)	6,031	4,004	tons/yr	5,018	6,146	405	723	
Gr: 195	Starch Modification Propylene Oxide (P.O.) Potentially Affected Emissions Unit Group 40Y1, 40V1, 40V50, 40U2, 40V20, 40V21, 40F51, 40F52, 40F53, 40F54, 40V15, 40V16, 40U23, 43V71, 43V72, 43F71, 43F72, 43F73, 43V85, 43V86, 30V1, 30V2, 40V11, 40V12, 40V14, 46V297, 46V201, 46V213, 46V204, 45V117, 45V118, 45V119, 45V120, 40D1, 40D20, 43D71, 41D1, 41D2, 41D3, 41D4, 41D5, 41D6, 41D7, 41D8, 30D1, 16D4, 16D5, 46D200, 19D301, 19D302, and 19D303 Group includes all potentially affected existing emissions units (affected by P.O. starch modification) downstream of the reactors. The existing reactors are unaffected and the 2 new reactors are addressed separately as new emissions units (PTE).	VOC			BAE = average of 2011 - 2012 P.O. starch production and emissions from group of potentially affected emissions units based on material balance; see sheet: P.O. Balance BAE				10.410	14.440	4.030	0.000	PAE based on existing capability to produce P.O. modified starches (361 mmLbs propylated starch/yr). The entire projected increase (PAE - BAE) is excludable because these are emissions that the units could have accommodated in the baseline period and the increase is unrelated to the project. Note that P.O. starch modification emissions associated with the 2 new P.O. reactors and 3 new dryers (Flash Dryer #4 and Roll Dryers #304 & #305) are addressed separately as new emissions units (based on PTE).
Gr: 995	Plant Fugitive Emissions												
Unit: 001	Plant Fugitive Emissions See calculation detail sheets: - Building Fug - WWTP Fug - Paved Road Fug - Truck Loadout & Receiving Fug												
Pollutants	See calculation detail sheets: - Building Fug - WWTP Fug - Paved Road Fug - Truck Loadout & Receiving Fug	PM			See calculation detail sheets: - Building Fug - WWTP Fug - Paved Road Fug - Truck Loadout & Receiving Fug				14.481	17.046	0.921	1.644	PAE = BAE (excluding coal/ash operations) * (projected grind increase) EE = (PAE - BAE) * (excludable grind increase); if > PAE BAE, EE = PAE - BAE PEI = PAE - BAE - EE See sheet: ATPA Prod Inputs for definition of terms
		PM10							2.985	3.518	0.191	0.342	
		PM2.5							0.704	0.828	0.045	0.080	
		SO2							8.676	10.627	0.700	1.250	
		VOC							21.961	26.898	1.773	3.164	

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Reviewer: Ghassan Shalabi
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ATPA Calculation Production Rate Inputs for PAE and EE

	Baseline Actual BA	Projected Actual PA	Could Have Accommodated CHA	Excludable E	Project Impact PI		Projected Increase	Excludable Portion
Grind Rates (bu/day)	69,398	85,000	75,000	5,602	10,000	14.41%	122.5%	35.9%
Grind Rates (mmbu/yr)	25.33	31.03	27.38	2.04				
Starch (lbs DS/day)	2,222,120	2,725,100	2,400,000	177,880	325,100	14.63%	122.6%	35.4%
Germ (lbs DS/day)	111,037	136,000	120,000	8,963	16,000	14.41%	122.5%	35.9%
Gluten (lbs DS/day)	158,353	195,114	167,727	9,374	27,386	17.29%	123.2%	25.5%
Fiber (lbs DS/day)	811,829	989,786	882,273	70,444	107,514	13.24%	121.9%	39.6%

Derivation of factors used to calculate PAE and EE:

1) Baseline Actual production rates (BA) from sheet: Yield Proj Material Bal (BA @ 69,303 bu/d grind)
2) Projected Actual production rates (PA) from sheet: Yield Proj Material Bal (PA @ 85,000 bu/d grind)
3) Could have accommodated production rates (CHA) from sheet Yield Proj Material Bal (CHA @ 75,000 bu/d grind)
4) Excludable production rates (E) = CHA - BA
5) Project Impact (PI) = PA - BA - E
6) Projected Increase (%) = PA / BA
7) Excludable Portion (%) = E / (PA - BA)

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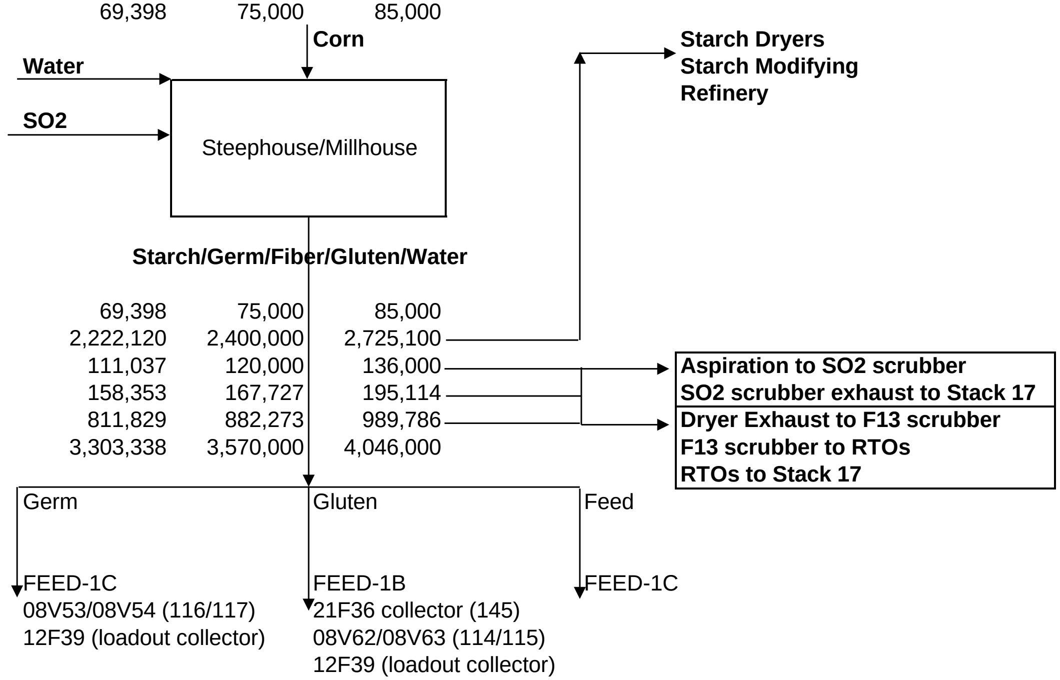
Yield Improvement Project Material Balance

	Actual	CHA	Projected
Starch In Fiber	18.30%	19%	17.50%
Gluten Comm Yield (lbs/bu)	2.51	2.46	2.525
Gluten DS Yield (lbs DS/bu)	2.28	2.24	2.30
Starch DS Yield (lbs/bu)	32.02	32	32.06
Starch Comm Yield (lbs/bu)	35.22	35.20	35.27
Grind Rate (bu/day)	69,398	75,000	85,000



	Actual	CHA	Projected
Grind Rates (bu/day)	69,398	75,000	85,000
Starch (lbs DS/day)	2,222,120	2,400,000	2,725,100
Germ (lbs DS/day)	111,037	120,000	136,000
Gluten (lbs DS/day)	158,353	167,727	195,114
Fiber (lbs DS/day)	811,829	882,273	989,786
TOTAL (lbs DS/day)	3,303,338	3,570,000	4,046,000

Company Name: Tate & Lyle Ingredients Americas LLC
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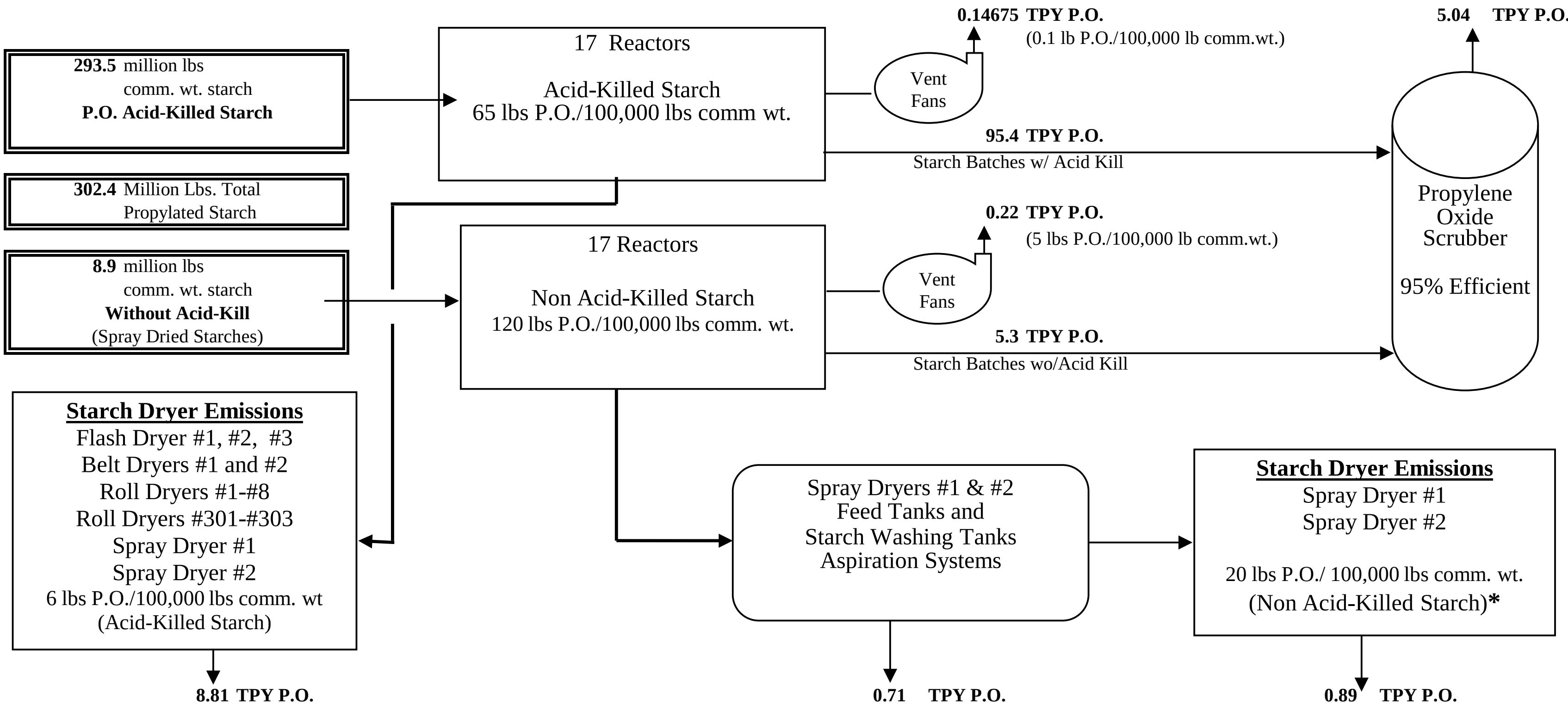
Significant Source Mod No.: 157-34094-00003
Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

Propylene Oxide (P.O.) Modified Starch Material Balance: 2011-2012 Average = BAE



Total Uncontrolled P.O. Emissions	**111.50 TPY P.O.**
Total Controlled P.O. Emissions	**15.81 TPY P.O.**

*** Note: Non-acid killed batches may be rarely processed on other dryer systems. The same emission factor applies for these dryers.**

NOTE: Average annual production for CY 2011-2012.

Total non-reactor controlled **10.41**

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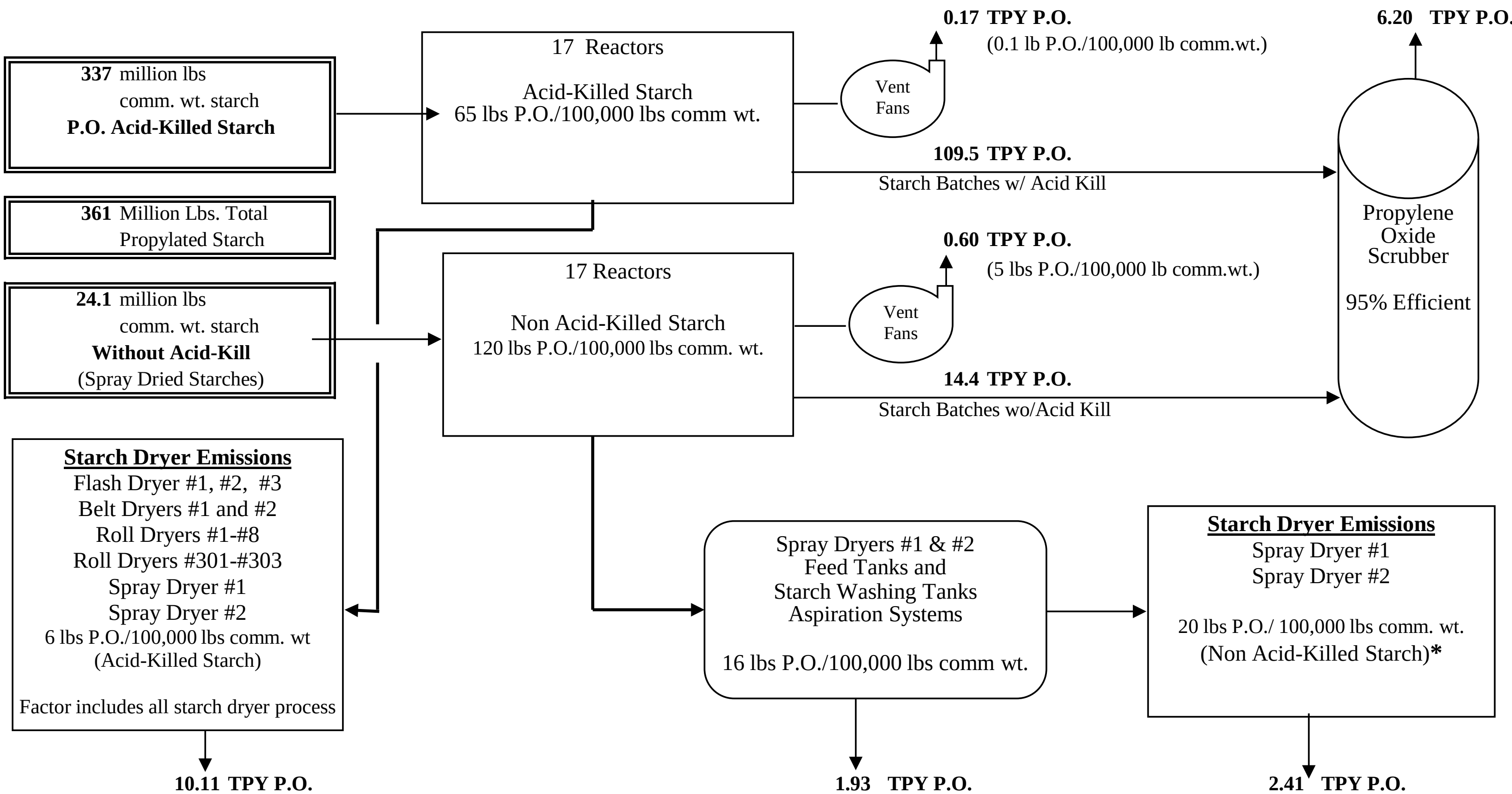
Reviewer: Ghassan Shalabi
Date: June 26, 2014

Propylene Oxide (P.O.) Modified Starch Material Balance: Existing Plant Capability and Projected Rates = PAE & CHAE



*** Note: Non-acid killed batches may be rarely processed on other dryer systems. The same emission factor applies for these dryers.**

Total Uncontrolled P.O. Emissions	**139.15 TPY P.O.**
Total Controlled P.O. Emissions	**21.41 TPY P.O.**

NOTE: Nominal 450 mmlbs/yr capacity stated in 2004 PSD Permit Application. Permit limits non-acid killed reactions to 1500 tons/yr P.O. usage which is approximately 30 million lbs/yr starch at 10% P.O. addition.

Total non-reactor controlled **14.44**

Appendix A: Emissions Calculations
Tate & Lyle, Sagamore

Company Name: Tate & Lyle Ingredients Americas LLC
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Significant Permit Mod No.: 157-34105-00003
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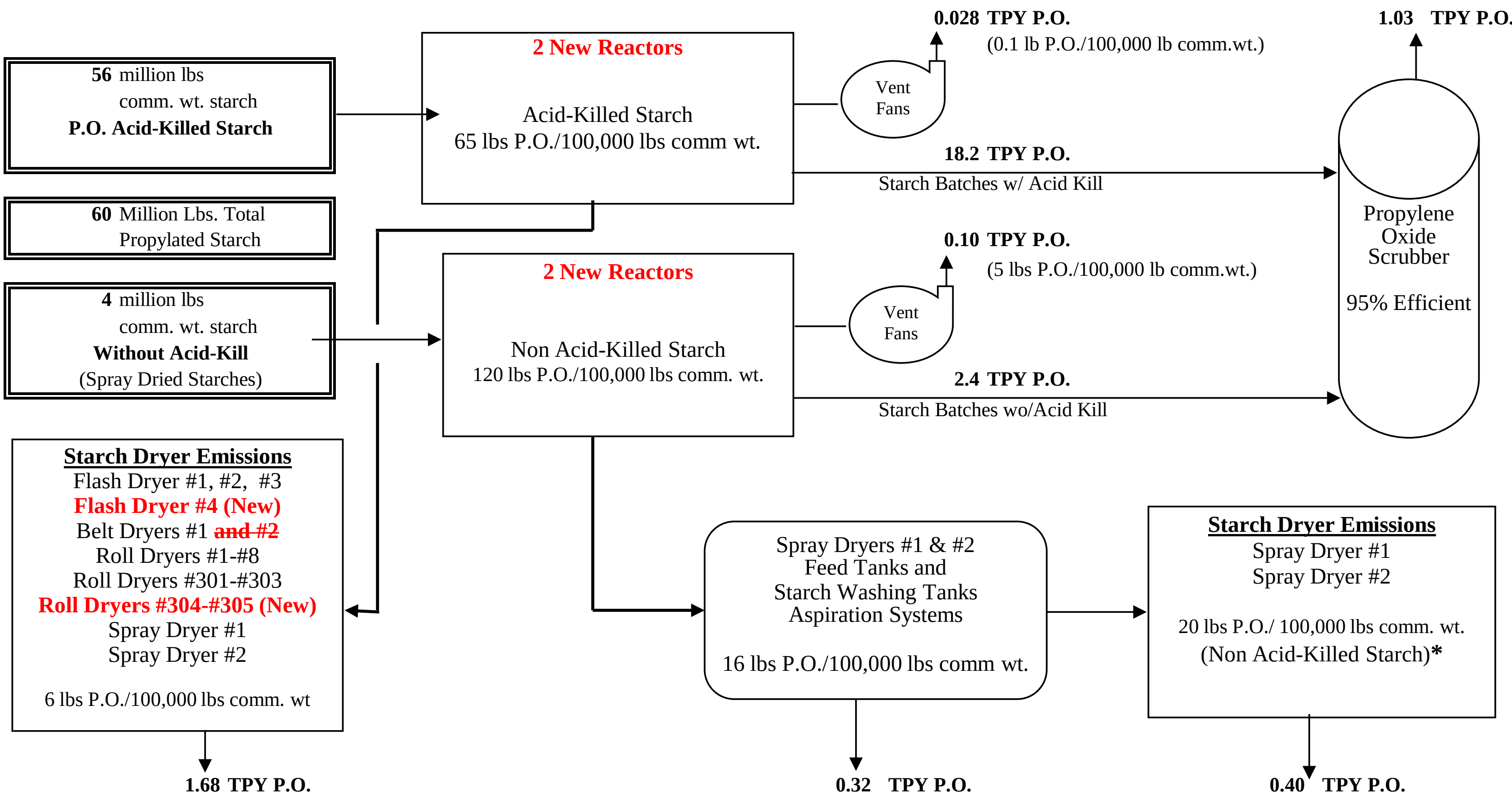
Date: June 26, 2014

Propylene Oxide (P.O.) Modified Starch Material Balance: 2 New Reactors



*** Note: Non-acid killed batches may be rarely processed on other dryer systems. The same emission factor applies for these dryers.**

Total Uncontrolled P.O. Emissions	**23.13 TPY P.O.**
Total Controlled P.O. Emissions	**3.56 TPY P.O.**

NOTE: Adding two P.O. reactors each with nominal 30 million lbs/yr capacity, 4 million lbs/yr of which is non-acid killed starch (total). Same ratio as current permit.

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Reviewer: Ghassan Shalabi
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New Oxidized Starch Reactor (18V274) PTE Calculation Detail

Data Element	Data Designation	Value		Reference/Calculation
Molecular Weights				
Methanol	[A]	32	lb/lb-mol	
Ethanol	[B]	46	lb/lb-mol	
1-Propanol	[C]	60	lb/lb-mol	
Ethyl Acetate	[D]	88	lb/lb-mol	
Chloroform	[E]	119	lb/lb-mol	
1-Butanol	[F]	74	lb/lb-mol	
Molar Volumetric Gas Constant	[G]	385.3	ft3/lb-mol	Constant based on 68°F standard temperature
Exhaust Gas Average Temperature	[H]	68.3	F	As measured during 2/13/09 test
	[I]	20.17	C	([H] - 32 F) x (5 / 9)
Exhaust Gas Aveage Moisture	[J]	1.75%		As measured during 2/13/09 test
Exhaust Gas Average Flow Rate	[K]	1710.0	acfm	As measured during 2/13/09 test
	[L]	1709.0	scfm	[K] x ((460 F + 68 F)/(460 F + [I]))
	[M]	1680.1	dscfm	[L] x (1 - ([J] / 100))
Test (Batch) Time	[N]	606.0	minutes	2/13/09 test duration
Emission Rates				
Methanol	[O]	6.07	ppmdv	Average value during 2/13/09 test
	[P]	0.513	lb/batch	[O] x [K] x [A] x 60 min/hr / [G] x 1,000,000
Ethanol	[Q]	2.27	ppmdv	Average value during 2/13/09 test
	[R]	0.276	lb/batch	[Q] x [K] x [B] x 60 min/hr / [G] x 1,000,000
1-Propanol	[S]	3.04	ppmdv	Average value during 2/13/09 test
	[T]	0.482	lb/batch	[S] x [K] x [C] x 60 min/hr / [G] x 1,000,000
Ethyl Acetate	[U]	2.78	ppmdv	Average value during 2/13/09 test
	[V]	0.646	lb/batch	[U] x [K] x [E] x 60 min/hr / [G] x 1,000,000
Chloroform	[W]	47.5	ppmdv	Average value during 2/13/09 test
	[X]	14.9	lb/batch	[W] x [K] x [G] x 60 min/hr / [G] x 1,000,000
1-Butanol	[Y]	1.48	ppmdv	Average value during 2/13/09 test
	[Z]	0.289	lb/hr	[Y] x [K] x [I] x 60 min/hr / [G] x 1,000,000
Total VOC	[AA]	17.1	lb/batch	[P] + [R] + [T] + [V] + [X] + [Z]
Chloroform Measured in Slurry at End of Batch	[BB]	3.89	lb/batch	As measured during 2/13/09 test
Estimates of Other Species in Slurry at End of Batch				
Methanol	[CC]	0.116	lb/batch	([P] / [AA]) x [BB]
Ethanol	[DD]	0.063	lb/batch	([R] / [AA]) x [BB]
1-Propanol	[EE]	0.109	lb/batch	([T] / [AA]) x [BB]
Ethyl Acetate	[FF]	0.147	lb/batch	([V] / [AA]) x [BB]
1-Butanol	[GG]	0.066	lb/batch	([Z] / [AA]) x [BB]

New Oxidized Starch Reactor (18V274) PTE Calculation Detail

Data Element	Data Designation	Value		Reference/Calculation

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Chloroform Measured in Fitrate after Slurry is Filtered	[HH]	0.275	lb/batch	As measured during 11/6/08 test
Estimates of Other Species in Filtrate after Slurry is Filtered				
Methanol	[II]	0.008	lb/batch	([P] / [AA]) x [HH]
Ethanol	[JJ]	0.004	lb/batch	([R] / [AA]) x [HH]
1-Propanol	[KK]	0.008	lb/batch	([T] / [AA]) x [HH]
Ethyl Acetate	[LL]	0.010	lb/batch	([V] / [AA]) x [HH]
1-Butanol	[MM]	0.005	lb/batch	([Z] / [AA]) x [HH]
Total Emitted (Reaction + Drying)				
Chloroform	[NN]	18.6	lb/batch	[X] + [BB] - [HH]
Methanol	[OO]	0.621	lb/batch	[P] + [CC] - [II]
Ethanol	[PP]	0.334	lb/batch	[R] + [DD] - [JJ]
1-Propanol	[QQ]	0.584	lb/batch	[T] + [EE] - [KK]
Ethyl Acetate	[RR]	0.783	lb/batch	[V] + [FF] - [LL]
1-Butanol	[SS]	0.350	lb/batch	[Z] + [GG] - [MM]
Test Batch Size	[TT]	99463	lb comm. wt.	As measured during 2/13/09 test
Production Batch Size (per reactor)	[UU]	200000	lb comm. wt.	Design
Emission Factors				
Chloroform	[VV]	37.3	lb/100000 lbs comm. wt.	[NN] x [UU] / [TT]
Methanol	[WW]	1.250	lb/100000 lbs comm. wt.	[OO] x [UU] / [TT]
Ethanol	[XX]	0.672	lb/100000 lbs comm. wt.	[PP] x [UU] / [TT]
1-Propanol	[YY]	1.174	lb/100000 lbs comm. wt.	[QQ] x [UU] / [TT]
Ethyl Acetate	[ZZ]	1.574	lb/100000 lbs comm. wt.	[RR] x [UU] / [TT]
1-Butanol	[AAA]	0.705	lb/100000 lbs comm. wt.	[SS] x [UU] / [TT]
Total VOC	[BBB]	42.7	lb/100000 lbs comm. wt.	[VV] + [WW + [XX] + [YY] + [ZZ] + [AAA]
Calculate 12-Month Total Emissions				
No. of Reactors	[CCC]	1		Design Basis
Batch Cycle Time (per reactor)	[DDD]	36	hours	Design (see attached batch schedule)
Hours/12-Month Period	[EEE]	8760	hours	Design
Cycles Per 12-Month Period	[FFF]	243.33	cycles	([EEE] / [DDD]) x [CCC])
Total Production Per 12 Month Period	[GGG]	48666667	lbs comm. wt.	[FFF] x [UU]
	[HHH]	24333	tons comm. wt.	
VOC Multiplier	[III]	1.1		Factor used to account for any unaccouted VOC species
Emission Rate				
Chloroform	[JJJ]	9077	lb/12-month period	([GGG / [UU]) / [VV]
	[KKK]	4.54	Tons/12-month period	[JJJ] / ### lb/ton
Methanol	[LLL]	304.1	lb/12-month period	([GGG / [UU]) / [WW]
	[MMM]	0.15	Tons/12-month period	[LLL] / ### lb/ton
VOC	[NNN]	11423	lb/12-month period	([GGG / [UU]) / [BBB]
	[OOO]	5.71	Tons/12-month period	[NNN] / ### lb/ton

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Reviewer: Ghassan Shalabi
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Fugitive Emissions Summary

S/V ID	Emission Unit ID(s)	Emission Unit Description	Ref.	Emission Rates (TPY)						
				PM	PM10	PM2.5	SO2	NOx	CO	VOC
NA	NA	Building Fugitives	[1]				8.68			12.91
NA	NA	WWTP Fugitives	[2]							9.05
NA	NA	Paved Road Fugitives	[3]	12.34	2.47	0.61				
NA	NA	Truck Loadout Fugitives	[4]	2.14	0.52	0.10				
Total	With coal & ash trucks			14.48	2.98	0.70	8.68			21.96
Total	Without coal & ash trucks			13.92	2.87	0.68	8.68			21.96

Notes:

[1] Building Fugitive Emission Calculations

[2] Wastewater Treatment Plant Emission Calculations

[3] Particulate matter emission estimates for paved roads based on AP-42 emission factor equations

[4] Fugitive Dust Emissions from Corn Unloading & Feed Loadout

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Building Fugitive Emission Calculations [1]

Building/Structure	Building Dimensions			Building Volume (ft^3) [2]	Building Free Volume (ft^3) [3]	Air Temp. (F)	Actual Airflow (acf/hr) [4]	Standard Airflow (scf/hr) [5]	Emission Rates													
									Ethanol				Acetaldehyde				VOC		Sulfur Dioxide			
	Length (ft)	Width (ft)	Height (ft)						MW	ppm [6]	lb/hr [7]	ton/yr [8]	MW	ppm [6]	b/hr [7]	ton/yr [8]	b/hr [9]	ton/yr [9]	MW	ppm [6]	lb/hr [7]	ton/yr [8]
Steephouse																						
14 Building	169	47	60	476,580																		
14 Bldg Annex	60	50	60	180,000																		
Total				656,580	492,435	70	2,954,610	2,742,770	46	5.0	1.76	7.70	44	0.1	0.03	0.15	1.79	7.84	64	3.0	1.47	6.42
Millhouse - 15 Bldg																						
Area 1	66	66	80	348,480																		
Area II	53	66	60	209,880																		
Area III	40	66	40	105,600																		
Total				663,960	497,970	70	2,987,820	2,773,599	46	1.0	0.36	1.56	44	0.1	0.03	0.15	0.39	1.71	64	1.0	0.49	2.17
Refinery																						
Bldg 18	144	144	40	829,440																		
Bldg 18A	106	75	40	318,000																		
Bldg 18B	50	50	40	100,000																		
Bldg 18C	34	44	40	59,840																		
Total				1,307,280	980,460	70	5,882,760	5,460,977	46	1.0	0.70	3.06	44	0.1	0.07	0.29	0.77	3.36	64	0.02	0.02	0.09
Feedhouse - 21 Bldg																						
Area I	156	19	40	118,560																		
Area II	156	25	80	312,000																		
Area III	156	44	80	549,120																		
Total				979,680	734,760	70	4,408,560	4,092,475	46	1.0	0.52	2.30	44	0.3	0.15	0.66	0.67	2.96	64	0.1	0.07	0.32
Total											**2.81**	**12.32**			**0.13**	**0.59**	**2.95**	**12.91**			**1.98**	**8.68**

Notes:

[1] Basis for Estimating Fugitive Air Flow From Buildings:
Mark's Mechanical Engineers Handbook (1951), Table 18, p. 1620 indicates the number of airchanges/hour for the following sources: Factories=2-4; Public Lavatories=10-20; Smoking Rooms=10-20; Commercial Laundries=10-30.
EPA Guidelines for Greenhouse Pesticide Use (40 CFR 170.110) indicates greenhouses using fans or other mechanical ventilating systems should be safe to enter after two hours (10 total air changes or 5 airchanges per hour).
OSHA Laboratory Guidelines (29 CFR 1910.1450 Appendix A recommends 4-12 room air changes per hour
National Fire Protection Association Guide for vegetable oil extraction plants (NFPA 36 - Standard for Solvent Extraction Plants - 1977) recommends at section 5-3.1 that "Enclosed plants shall have sufficient ventilation to change the volume of air at least six times per hour".
Since vegetable oil extraction is associated with corn wet milling, a factor of six air changes per hour is deemed appropriate for fugitive emission calculations.

[2] Building Volume calculated using CAD.

[3] Building Volume x 0.75 [Basis for free volume is that 25% of Buildings are occupied by equipment (75% open air space)]

[4] Building Free Volume x 6 Air Changes per Hour (see Note [1])

[5] Actual Air Flow x [492/(460 + Air Temp.)] [Standard temperature used: 32 F (460 K)]

[6] Basis for Concentration Values Used in Building Fugitives Calculations — Emission calculations are based on fugitive emissions monitoring following the 2006 plant expansion.

[7] [(ppm/1,000,000) x Standard Airflow x MW]/359 scf/lb mole

[8] lb/hr x 8760 hr/yr/2000 lb/ton

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Basis for Concentration Values Used in Building Fugitives Calculations

Sampling Location		Test Date	Tester	Emission Rate (ppm)					
				Ethanol [3]		Acetaldehyde [3]		Sulfur Dioxide [3]	
Steephouse									
	1st Floor	7/1/08	[1]	0.7	*	0.05	*	2.5	
		8/13/08	[2]	0.372			*	1	
		8/14/08	[2]	0.365			*	1	
	3rd Floor	7/1/08	[1]	0.6	*	0.08	*	0.061	
		8/13/08	[2]	3.097			*	1	
		8/14/08	[2]	0.865			*	1	
	Maximum Value			3.097		0.08		2.5	
	Value Used			5		0.1		3	
Millhouse									
	1st Floor	7/1/08	[1]	0.6	*	0.06	*	0.12	
		8/13/08	[2]	0.508			*		*
		8/14/08	[2]	0.625			*		*
	2nd Floor	7/1/08	[1]	0.7	*	0.06	*	0.23	
		8/13/08	[2]	0.329			*	1	
		8/14/08	[2]	0.435			*		*
	Maximum Value			0.7		0.06		1	
	Value Used			1		0.1		1	
Refinery									
	1st Floor (Separator Feed Tank	7/1/08	[1]	0.6	*	0.05	*	0.014	
	1st Floor (Tank Room)	7/1/08	[1]	0.6	*	0.05	*	0.0066	
		8/13/08	[2]		*		*		*
		8/14/08	[2]	0.023			*		*
	2nd Floor	7/1/08	[1]	0.7	*	0.05	*	0.0075	
		8/13/08	[2]		*		*		*
		8/14/08	[2]	0.069			*		*
	Maximum Value			0.7		0.05		0.014	
	Value Used			1		0.1		0.02	
Feedhouse									
	1st Floor	7/1/08	[1]	0.9	*	0.08	*	0.092	
		8/13/08	[2]	0.75		0.252			*
		8/14/08	[2]	0.08			*		*
	2nd Floor	7/1/08	[1]	0.4	*	0.07		0.049	
	Maximum Value			0.9		0.252		0.092	
	Value Used			1		0.3		0.1	

Notes:
[1] Certified Enfironmetnal Management, LTD.
[2] Tate & Lyle Internal Testing
[3] An asterisk (*) indicates a non-detect value. The value listed is the detection limit of the instrument.

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Wastewater Treatment Plant Emission Calculations

Data Element	Data	Value		Reference/Calculation
Annual Operating Hours	[A]	8760	hrs	Design Value
Sagamore Waste Treatment Surface Areas				
South Aeration Basis - Water Area				
Length	[B]	187.5	ft	Design Value
Width	[C]	127.5	ft	Design Value
Surface Area	[D]	23906.25	ft2	[B] x [C]
South Aeration Basin Corner Area				
Length	[E]	107.50	ft	Design Value
Width	[F]	107.50	ft	Design Value
Diameter	[G]	107.50	ft	Design Value
Surface Area	[H]	2479.99	ft2	([E] x [F]) - (π x ($[G]^2$ / 4))
South Aeration Basin - Total Water Are	[I]	21426.26	ft2	[D] - [H]
North Aeration Basin - Total Water Are	[J]	21426.26	ft2	[I]
Clarifier				
Diameter	[K]	90	ft	Design Value
Surface Area	[L]	6361.73	ft2	π x ($[K]^2$ / 4)
Total Surface Area	[M]	49214.24	ft2	[I] + [J] + [L]
Emission Factors				
Acetaldehyde	[N]	1.50E-05	lb/ft2/hr	Decatur Plant used. Overestimates since a BVF is sued for equalization at the Sagamore Plant. The East EQ rte expected to be highest VOC emission rate for any waste treatmetn tank at either the Sagamore or Decatur Plants.
Ethanol	[O]	2.70E-05	lb/ft2/hr	
Emission Rates				
Acetaldehyde	[P]	0.74	lb/hr	[M] x [N]
	[Q]	3.23	TPY	[P] x [A] / 2000 lb/ton
Ethanol	[R]	1.33	lb/hr	[M] x [O]
	[S]	5.82	TPY	[R] x [A] / 2000 lb/ton
VOC	[T]	2.07	lb/hr	[P] + [R]
	[U]	9.05	TPY	[Q] + [S]

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Calculation of Vehicle Miles Travelled (VMT) per Truck Type

Truck Type	Status	Segment	Segment Length	
			feet	miles [1]
Corn	Full	R1	348	0.066
		R2	518	0.098
		R3	582	0.110
		R4	883	0.167
		R5	882	0.167
		R9	298	0.056
		Total	3511	0.665
	Empty	R10	702	0.133
		R14	668	0.127
		R15	200	0.038
		R2	518	0.098
		R2	518	0.098
		Total	2606	0.49
Feed/Germ/ Meal	Full	R10	702	0.133
		R14	668	0.127
		R15	200	0.038
		R2	518	0.098
		R2	518	0.098
		Total	2606	0.49
	Empty	R1	348	0.066
		R2	518	0.098
		R3	582	0.110
		R4	883	0.167
		R5	882	0.167
		R9	298	0.056
		Total	3511	0.665
Syrup	Full	R4	883	0.167
		R5	882	0.167
		R9	298	0.056
		R10	702	0.133
		R14	668	0.127
		R15	200	0.038
		R2	518	0.098
		R1	348	0.066
		Total	4499	0.852
	Empty	R1	348	0.066
		R2	518	0.098
		R3	582	0.110
		Total	1448	0.274

Truck Type	Status	Segment	Segment Length	
			feet	miles [1]
Chemical [3]	Full	R1	348	0.066
		R2	518	0.098
		R3	582	0.110
		R4	883	0.167
		R6	381	0.072
		R7	227	0.043
		Total	2939	0.557
	Empty	R7	227	0.043
		R6	381	0.072
		R5	882	0.167
		R9	298	0.056
		R10	702	0.133
		R14	668	0.127
		R15	200	0.038
		R2	518	0.098
		R1	348	0.066
		Total	4224	0.800
Coal	Full	R1	348	0.066
		R2	518	0.098
		R3	582	0.110
		R4	883	0.167
		Total	2331	0.441
	Empty	R4	883	0.167
		R5	882	0.167
		R9	298	0.056
		R10	702	0.133
		R14	668	0.127
		R15	200	0.038
		R2	518	0.098
		R1	348	0.066
		Total	4499	0.852
Ash [4]	Full	R6	381	0.072
		R5	882	0.167
		R9	298	0.056
		R10	702	0.133
		R14	668	0.127
		R15	200	0.038
		R2	518	0.098
		R1	348	0.066
		Total	3997	0.757

Calculation of Vehicle Miles Travelled (VMT) per Truck Type

Company Name: Tate & Lyle Ingredients Americas LLC
Address City IN Zip: 2245 North Sagamore Parkway, Lafayette, IN 47904
Significant Source Mod No.: 157-34094-00003
Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

Truck Type	Status	Segment	Segment Length feet	Segment Length miles [1]
Bulk Starch	Full	R4	883	0.167
		R5	882	0.167
		R9	298	0.056
		R10	702	0.133
		R14	668	0.127
		R15	200	0.038
		R2	518	0.098
		R1	348	0.066
		Total	4499	0.852
	Empty	R1	348	0.066
		R2	518	0.098
		R3	582	0.110
		Total	1448	0.274
Starch Warehouse	Full	R12	130	0.025
		R13	172	0.033
		R2	518	0.098
		R1	348	0.066
		Total	1168	0.221
	Empty	R1	348	0.066
		R2	518	0.098
		R13	172	0.033
		R14	668	0.127
		Total	1706	0.323

Truck Type	Status	Segment	Segment Length feet	Segment Length miles [1]
Waste [2]	Full	R5	882	0.167
		R9	298	0.056
		R10	702	0.133
		R14	668	0.127
		R15	200	0.038
		R2	518	0.098
		R1	348	0.066
		Total	3616	0.685
	Empty	R1	348	0.066
		R2	518	0.098
		R3	582	0.110
		R4	883	0.167
		R5	882	0.167
		Total	3213	0.609

Notes:
[1] Segment Lenth (feet) / 5280 ft/mile
[2] Assume all waste trucks have identical routes.
[3] Assume all chemical trucks have identical routes.
[4] Assume ash is hauled by incoming coal trucks therefore no empty ash truck route.

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Particulate matter emission estimates for paved roads based on AP-42 emission factor equations

Type of Truck	Status	Number of trips per day [6]	Vehicle Weight (ton) [7]	Silt Loading (g/m^2) [1]	VMT per trip (mile) [8]	$PM_{2.5}$ (lb/VMT) [1]	PM Emission Rate (lb/day) [2]	PM Emission Rate (ton/yr) [3]	PM_{10} (lb/VMT) [1]	PM_{10} Emission Rate (lb/day) [2]	PM_{10} Emission Rate (ton/yr) [3]	PM (lb/VMT) [1]	$PM_{2.5}$ Emission Rate (lb/day) [2]	$PM_{2.5}$ Emission Rate (ton/yr) [3]
Corn	Full	98.2	40	1.1	0.66	0.47	30.97	5.65	0.09	6.19	1.13	0.02	1.52	0.28
Corn	Empty	98.2	12.5	1.1	0.49	0.14	7.02	1.28	0.029	1.40	0.26	0.01	0.34	0.06
Feed/Germ/Meal	Full	54.5	40	1.1	0.49	0.47	12.76	2.33	0.095	2.55	0.47	0.023	0.63	0.11
Feed/Germ/Meal	Empty	54.5	12.5	1.1	0.66	0.14	5.25	0.96	0.029	1.05	0.19	0.007	0.26	0.05
Syrup	Full	0.2	40	1.1	0.85	0.47	0.08	0.02	0.095	0.02	0.00	0.023	0.00	0.00
Syrup	Empty	0.2	15	1.1	0.27	0.17	0.01	0.00	0.035	0.00	0.00	0.009	0.00	0.00
Bulk Starch	Full	2.9	35	1.1	0.85	0.41	1.04	0.19	0.083	0.21	0.04	0.020	0.05	0.01
Bulk Starch	Empty	2.9	15	1.1	0.27	0.17	0.14	0.03	0.035	0.03	0.01	0.009	0.01	0.00
Starch Warehouse	Full	64.6	20	1.1	0.22	0.23	3.34	0.61	0.047	0.67	0.12	0.011	0.16	0.03
Starch Warehouse	Empty	64.6	5	1.1	0.32	0.06	1.19	0.22	0.011	0.24	0.04	0.003	0.06	0.01
Chemicals	Full	5.4	40	1.1	0.56	0.47	1.43	0.26	0.095	0.29	0.05	0.023	0.07	0.01
Chemicals	Empty	5.4	15	1.1	0.80	0.17	0.75	0.14	0.035	0.15	0.03	0.009	0.04	0.01
Coal	Full	8.5	40	1.1	0.44	0.47	1.77	0.32	0.095	0.35	0.06	0.023	0.09	0.02
Coal	Empty	8.5	12.5	1.1	0.85	0.14	1.04	0.19	0.029	0.21	0.04	0.007	0.05	0.01
Ash	Full	0.8	40	1.1	0.76	0.47	0.27	0.05	0.095	0.05	0.01	0.023	0.01	0.00
Waste	Full	2.2	20	1.1	0.68	0.23	0.35	0.06	0.047	0.07	0.01	0.011	0.02	0.00
Waste	Empty	2.2	12.5	1.1	0.61	0.14	0.19	0.04	0.029	0.04	0.01	0.007	0.01	0.00
Total							**67.61**	**12.34**		**13.52**	**2.47**		**3.32**	**0.61**
Total without Coal & Ash Trucks							**64.52**	**11.78**		**12.90**	**2.36**		**3.17**	**0.58**

Notes:

[1] Emission factor equation taken from AP-42 Section 13.2.1.3 Paved Roads (published 1/11).

$$E_{ext} = [\ k\ (sL)^{0.91} \times (W)^{1.02}\ ]\ (1 - P/4N)$$

where:

E_{ext} = Emission rate in lb/Vehicle Mile Travelled (VMT)
k = 0.011 lb/VMT for PM (Table 13.2.1-1 Particle Size Multipliers for Paved Road Equation)
k = 0.0022 lb/VMT for PM10 (Table 13.2.1-1 Particle Size Multipliers for Paved Road Equation)
k = 0.00054 lb/VMT for PM2.5 (Table 13.2.1-1 Particle Size Multipliers for Paved Road Equation)
sL = Silt loading = 1.1 g/m2 (Table13.2.1-3 mean valuee for corn wet mills
W = Average truck weight (tons) for vehicles on each Route (road segment).
P = Number of "wet" days with at least 0.01 in. of precipitation = 120
N = 365 days

[2] Emission Rate (lb/VMT) x VMT/Trip (miles) x Number of Trips/Day
[3] Emission Rate (lb/day) x 365 days/year/2000 lb/ton
[4] Number of Trips/Day x Vehicle Weight (ton)
[5] Total Weight (ton)/Number of Trips/Day
[6] Number of truck loads provided by D. Copeland
[7] Data taken from Iowa fugitive emission estimates & data from Sagamore Main Gate.
[8] Calculation of Vehicle Miles Travelled (VMT) per Truck Type

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Date: June 26, 2014

Fugitive Dust Emissions from Corn Unloading & Feed Loadout

Type of Activity	Material Transferred (tons/day)	PM				PM_{10}				$PM_{2.5}$			
		Emission Factor (lb/ton) [3]	Uncontrolled (lb/day) [4]	Controlled (lb/day) [5]	Controlled (ton/yr) [6]	Emission Factor (lb/ton) [3]	Uncontrolled (lb/day) [4]	Controlled (lb/day) [5]	Controlled (ton/yr) [6]	Emission Factor (lb/ton) [3]	Uncontrolled (lb/day) [4]	Controlled (lb/day) [5]	Controlled (ton/yr) [6]
Corn Unloading Straight Trucks [1]	112	0.18	20.2	2.02	0.37	0.059	6.6	0.66	0.12	0.010	1.1	0.11	0.02
Corn Unloading Hopper Trucks [2]	2,688	0.035	94.1	9.41	1.72	0.0078	21.0	2.10	0.38	0.0013	3.5	0.35	0.06
Feed/Meal/Germ Truck Loadout	952	0.0033	3.1	0.31	0.06	0.0008	0.8	0.08	0.01	0.0008	0.8	0.08	0.01
TOTAL					**2.14**				**0.52**				**0.10**

Notes:

[1] Emission factors taken from AP-42 Table 9.9.1-1 - Particulate Emission Factors for Grain Elevators, Grain Receiving, Straight truck (SCC 3-02-005-51)(Rev 3/03). Emission factor does not include control equipment. A capture/control efficiency of 90% is assumed. If all corn is assumed to be received by truck, this equates to approximately 125 trucks per day if each truck is approximately 800 bushels. Of this total, only 5 of the trucks are straight trucks. The remaining trucks are hopper trucks. Note that corn is also received in hopper railcars; however, emission factors are less for rail than for truck. Therefore, all grain is assumed to either be received by straight truck or hopper truck.

[2] Emission factors taken from AP-42 Table 9.9.1-1 - Particulate Emission Factors for Grain Elevators, Grain Receiving, Hopper truck (SCC 3-02-005-52)(Rev 3/03). Emission factor does not include control equipment. A capture/control efficiency of 90% is assumed. If all corn is assumed to be received by truck, this equates to approximately 125 trucks per day if each truck is approximately 800 bushels. Of this total, 120 of the trucks are hopper trucks. The remaining 5 trucks are straight trucks. Note that corn is also received in hopper railcars; however, emission factors are less for rail than for truck. Therefore, all grain is assumed to either be received by straight truck or hopper truck.

[3] Emission factors taken from AP-42 Table 9.9.1-2, Particulate Emission Fators for Grain Processing Facilities, Animal Feed Mills, Feed Shipping (SCC 3-02-008-03)(Rev 3/03). PM2.5 assumed equal to PM10. Emission Factor does not include control equipment. A capture/control efficiency of 90% was assumed. This estimate assumes all product is sold in trucks.

[4] Material Transferred (tons/day) x Emission Factor (lb/ton)

[5] Uncontrolled (lb/day) x (1 - (Control Efficiency (%) / 100))

[6] Controlled (lb/day) x 365 day/yr / 2000 lb/ton

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CoGen Boiler (31B1) Natural Gas Conversion Emissions Summary

Coal Boiler Baseline Actual Emissions (tpy)

PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC	H_2SO_4	F	Pb	GHGs
20.74	68.43	58.02	511.30	369.13	5.00	2.17	5.11	0.22	1.54E-03	167,442

Coal Boiler Post Natural Gas Conversoin PTE (tpy)

PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC	H_2SO_4	F	Pb	GHGs
1.88	7.54	7.54	0.60	101.18	70.82	5.46	5.95E-03	0.00	0.00	118,381

Coal Boiler Support Facility Equipment Shutdown BAE (tpy)

PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC	H_2SO_4	F	Pb	GHGs
0.38	0.38	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Coal Boiler Natural Gas Conversoin Creditable Emissions Increases/Decreases (tpy)

PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC	H_2SO_4	F	Pb	GHGs
-19.23	-61.27	-50.75	-510.71	-267.95	65.82	3.29	-5.11	-0.22	-1.54E-03	-49,062

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CoGen Boiler Baseline Actual Emissions (BAE)

Data Element		Data Designation	Value		Reference/Calculation
Baseline Periods					
	1 - NOx		1/2007 - 12/2008		See: Coal Boiler Production and CEM Data
	2 - SO2		8/2006 - 7/2008		
	3 - All Other Pollutants		10/2009 - 9/2011		
Baseline Coal Boiler Productoin Data					
	Coal Usage	[A]	72,325	tons/yr	Baseline Period 3; see: Coal Boiler Production and CEM Data
	Coal Usage	[B]	1,613,806	mmBtu/yr	Baseline Period 3; see: Coal Boiler Production and CEM Data
	Coal Average HHV	[C]	11,158	Btu/lb	Baseline Period 3; see: Coal Boiler Production and CEM Data
Emission Factors					
	PM Filterable	[D]	0.0257	lb/mmBtu	Average of Airtech Test Report 2824 (10/08), 3045B (9/09) & 4315B (10/13)
	PM Condensable	[E]	0.0591	lb/mmBtu	Airtech Test Report 3045B (9/09)
	PM10	[F]	0.0848	lb/mmBtu	= [D] + [E]
	PM2.5 Filterable	[G]	0.0128	lb/mmBtu	Airtech Test Report 3045B (9/09)
	PM2.5	[H]	0.0719	lb/mmBtu	= [G] + [E]
	CO	[I]	0.0062	lb/mmBtu	Airtech Test Report 3045B (9/09)
	VOC	[J]	0.06	lb/ton	AP-42, Table 1.1-19 (9/98)
	F	[K]	2.71E-04	lb/mmBtu	Airtech Test Report 3045B (9/09)
	Pb	[L]	1.91E-06	lb/mmBtu	Airtech Test Report 3045B (9/09)
	GHGs (CO2e)	[M]	207.51	lb/mmBtu	40 CFR 98 Subpart C, Tables C-1 and C-2
Emissions					
	PM	[N]	20.74	tpy	= [D] * [B] / 2,000 lb/ton
	PM10	[O]	68.43	tpy	= [F] * [B] / 2,000 lb/ton
	PM2.5	[P]	58.02	tpy	= [H] * [B] / 2,000 lb/ton
	SO2	[Q]	511.3	tpy	See: Coal Boiler Production and CEM Data
	NOx	[R]	369.1	tpy	See: Coal Boiler Production and CEM Data
	CO	[S]	5.00	tpy	= [I] * [B] / 2,000 lb/ton
	VOC	[T]	2.17	tpy	= [J] * [A] / 2,000 lb/ton
	H2SO4	[U]	5.11	tpy	= [Q] * 0.01
	F	[V]	0.22	tpy	= [K] * [B] / 2,000 lb/ton
	Pb	[W]	0.002	tpy	= [L] * [B] / 2,000 lb/ton
	GHGs (CO2e)	[X]	167,442	tpy	= [M] * [B] / 2,000 lb/ton

Post-conversion CoGen Boiler Potential to Emit (PTE)

Data Element		Data Designation	Value		Reference/Calculation
Design Heat Input Capacity		[A]	231	mmBtu/hr	Boiler design specification
Natural Gas HHV		[B]	1,020	Btu/cf	Default value from AP-42 Chapter 1.4 (7/98)
Emission Factors					
	PM Filterable	[C]	0.0019	lb/mmBtu	AP-42, Table 1.4-2 (7/98)
	PM Condensable	[D]	0.0056	lb/mmBtu	AP-42, Table 1.4-2 (7/98)
	PM10	[E]	0.0075	lb/mmBtu	AP-42, Table 1.4-2 (7/98)
	PM2.5	[F]	0.0075	lb/mmBtu	AP-42, Table 1.4-2 (7/98)
	SO2	[G]	5.88E-04	lb/mmBtu	AP-42, Table 1.4-2 (7/98)
	NOx	[H]	0.10	lb/mmBtu	Burner design specification
	CO	[I]	0.07	lb/mmBtu	Burner design specification
	VOC	[J]	0.0054	lb/mmBtu	AP-42, Table 1.4-2 (7/98)
	GHGs (CO2e)	[K]	117.0	lb/mmBtu	40 CFR 98 Subpart C, Tables C-1 and C-2
Potential Emissions					
	PM	[L]	1.88	tpy	= [C] * [A] * 8,760 hrs/yr / 2,000 lb/ton
	PM10	[M]	7.54	tpy	= [E] * [A] * 8,760 hrs/yr / 2,000 lb/ton
	PM2.5	[N]	7.54	tpy	= [F] * [A] * 8,760 hrs/yr / 2,000 lb/ton
	SO2	[O]	0.60	tpy	= [G] * [A] * 8,760 hrs/yr / 2,000 lb/ton
	NOx	[P]	101.18	tpy	= [H] * [A] * 8,760 hrs/yr / 2,000 lb/ton
	CO	[Q]	70.82	tpy	= [I] * [A] * 8,760 hrs/yr / 2,000 lb/ton
	VOC	[R]	5.46	tpy	= [J] * [A] * 8,760 hrs/yr / 2,000 lb/ton
	H2SO4	[S]	0.006	tpy	= [O] * 0.01
	GHGs (CO2e)	[T]	118,381	tpy	= [K] * [A] * 8,760 hrs/yr / 2,000 lb/ton

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CoGen Boiler Support Facilities Baseline Actual Emissions (BAE)

Data Element			Data Designation	Value		Reference/Calculation
Baseline Period				10/2009 - 9/2011		See: Coal Boiler Production and CEM Data
Coal Boiler Coal Usage			[A]	72,325	tons/yr	See: Coal Boiler Production and CEM Data
Coal Boiler Operating Hours			[B]	8,428	hrs/yr	Average annual hours of operation for baseline period
Coal Storage Silo (31V3)						
	Coal Unloading Rate to Silo		[C]	40	tons/hr	Design value
	Operating Hours		[D]	1,808	hrs/yr	= [A] / [C]
	Bin Vent Air Flow		[E]	1,200	acfm	Design value
	Bin Vent Exhaust Loading		[F]	0.005	gr/acf	No test data available; design = 0.01 gr/scf; conservativley assume 0.005 gr/acf
	PM2.5 / PM10 Ratio		[G]	0.72581		Ratio for SCC 30101401
	Emissions					
		PM	[H]	0.22	tons/yr	= [F] * [E] * 60 min/hr * [B] / 7,000 gr/lb / 2,000 lb/ton
		PM10	[I]	0.22	tons/yr	= [H
		PM2.5	[K]	0.16	tons/yr	= [I] * [G]
Coal Storage Day Bin (31V4)						
	Operating Hours		[L]	904	hrs/yr	= [D] / 2
	Bin Vent Air Flow		[M]	800	acfm	Design value
	Bin Vent Exhaust Loading		[N]	0.005	gr/acf	No test data available; design = 0.01 gr/scf; conservativley assume 0.005 gr/acf
	PM2.5 / PM10 Ratio		[O]	0.72581		Ratio for SCC 30101401
	Emissions					
		PM	[P]	0.02	tons/yr	= [N] * [M] * 60 min/hr * [L] / 7,000 gr/lb / 2,000 lb/ton
		PM10	[Q]	0.02	tons/yr	= [P]
		PM2.5	[R]	0.01	tons/yr	= [Q] * [O]
Coal Storage Day Bin (31V5)						
	Operating Hours		[S]	904	hrs/yr	= [D] / 2
	Bin Vent Air Flow		[T]	800	acfm	Design value
	Bin Vent Exhaust Loading		[U]	0.005	gr/acf	No test data available; design = 0.01 gr/scf; conservativley assume 0.005 gr/acf
	PM2.5 / PM10 Ratio		[V]	0.72581		Ratio for SCC 30101401
	Emissions					
		PM	[W]	0.02	tons/yr	= [U] * [T] * 60 min/hr * [S] / 7,000 gr/lb / 2,000 lb/ton
		PM10	[X]	0.02	tons/yr	= [W]
		PM2.5	[Y]	0.01	tons/yr	= [X] * [V]
Ash Silo (31V1)						
	Operation		[Z]	3.0	hrs/day	Ash pulled from boiler for 3 hours each day of operation
	Operating Hours		[AA]	1,053	hrs/yr	= [B] / 24 hrs/d * [Z]
	Bin Vent Air Flow		[BB]	1,000	acfm	Design value
	Bin Vent Exhaust Loading		[CC]	0.005	gr/acf	No test data available; design = 0.01 gr/scf; conservativley assume 0.005 gr/acf
	PM2.5 / PM10 Ratio		[DD]	0.82979		Ratio for SCC 30201401
	Emissions					
		PM	[EE]	0.02	tons/yr	= [CC] * [BB] * 60 min/hr * [AA] / 7,000 gr/lb / 2,000 lb/ton
		PM10	[FF]	0.02	tons/yr	= [EE]
		PM2.5	[GG]	0.02	tons/yr	= [EE] * [DD]
Boiler Ash Transfer Jet (31Z3)						
	Operation		[HH]	3.0	hrs/day	Ash pulled from boiler for 3 hours each day of operation
	Operating Hours		[II]	1,053	hrs/yr	= [B] / 24 hrs/d * [HH]
	Bin Vent Air Flow		[JJ]	2,100	acfm	Design value
	Bin Vent Exhaust Loading		[KK]	0.005	gr/acf	No test data available; design = 0.01 gr/scf; conservativley assume 0.005 gr/acf
	PM2.5 / PM10 Ratio		[LL]	0.82979		Ratio for SCC 30201401
	Emissions					
		PM	[MM]	0.05	tons/yr	= [KK] * [JJ] * 60 min/hr * [II] / 7,000 gr/lb / 2,000 lb/ton
		PM10	[NN]	0.05	tons/yr	= [MM]
		PM2.5	[OO]	0.04	tons/yr	= [NN] * [LL]
GMH Starch Storage Silo (9V32						
	Operating Hours		[PP]	8,322	hrs/yr	= Annual average hours of operation, 95% uptime
	Bin Vent Air Flow		[QQ]	350	acfm	Design value
	Bin Vent Exhaust Loading		[RR]	0.005	gr/acf	No test data available; design = 0.01 gr/scf; conservativley assume 0.005 gr/acf
	PM2.5 / PM10 Ratio		[SS]	0.56962		Ratio for SCC 30299998
	Emissions					
		PM	[TT]	0.06	tons/yr	= [RR] * [QQ] * 60 min/hr * [PP] / 7,000 gr/lb / 2,000 lb/ton
		PM10	[UU]	0.06	tons/yr	= [TT]
		PM2.5	[VV]	0.04	tons/yr	= [UU] * [SS]
Utilities Lime Storage Silo (31V10)						
	Operating Hours		[WW]	20	hrs/yr	= Annual average hours of operation
	Bin Vent Air Flow		[XX]	675	acfm	Design value
	Bin Vent Exhaust Loading		[YY]	0.005	gr/acf	No test data available; design = 0.01 gr/scf; conservativley assume 0.005 gr/acf
	PM2.5 / PM10 Ratio		[ZZ]	0.72581		Ratio for SCC 30201401
	Emissions					
		PM	[AAA]	0.00	tons/yr	= [YY] * [XX] * 60 min/hr * [WW] / 7,000 gr/lb / 2,000 lb/ton
		PM10	[BBB]	0.00	tons/yr	= [AAA]
		PM2.5	[CCC]	0.00	tons/yr	= [BBB] * [ZZ]

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Total Emissions				
	PM		0.38	tons/yr
	PM10		0.38	tons/yr
	PM2.5		0.27	tons/yr

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Date: June 26, 2014

CoGen (Coal) Boiler Production and CEM Data

Month	Coal tons	HHV Btu/lb	Coal MMBtu	Coal MMBtu 24-month Annual Avg.	SO2 lb/MMBtu	SO2 tons	SO2 tons 24-month Annual Avg.	NOx lb/MMBtu	NOx tons	NOx tons 24-month Annual Avg.
Jan 04										
Feb 04										
Mar 04										
Apr 04										
May 04										
Jun 04										
Jul 04	5,445	11,183	121,783							
Aug 04	5,532	11,195	123,861							
Sept 04	4,177	11,194	93,515							
Oct 04	4,645	11,171	103,779							
Nov 04	6,072	11,149	135,393							
Dec 04	6,052	11,149	134,947							
Jan 05	6,707	11,150	149,566		0.643	48.09		0.489	36.57	
Feb 05	5,746	11,145	128,078		0.614	39.32		0.4	25.62	
Mar 05	6,603	11,105	146,653		0.54	39.60		0.485	35.56	
Apr 05	5,121	11,114	113,830		0.563	32.04		0.465	26.47	
May 05	5,761	11,124	128,171		0.574	36.78		0.515	33.00	
Jun 05	5,475	11,153	122,125		0.555	33.89		0.509	31.08	
Jul 05	5,467	11,210	122,570		0.522	31.99		0.509	31.19	
Aug 05	5,733	11,124	127,548		0.542	34.57		0.537	34.25	
Sept 05	4,975	11,083	110,276		0.537	29.61		0.492	27.13	
Oct 05	5,007	11,130	111,456		0.606	33.77		0.414	23.07	
Nov 05	5,614	11,010	123,620		0.591	36.53		0.481	29.73	
Dec 05	6,453	11,032	142,379		0.617	43.92		0.57	40.58	
Jan 06	6,197	11,059	137,065		0.564	38.65		0.455	31.18	
Feb 06	5,490	11,040	121,219		0.581	35.21		0.498	30.18	
Mar 06	6,765	11,052	149,534		0.601	44.93		0.401	29.98	
Apr 06	5,271	11,132	117,354		0.616	36.14		0.452	26.52	
May 06	6,367	11,113	141,513		0.595	42.10		0.453	32.05	
June 06	5,693	11,038	125,679	1,515,957	0.619	38.90	338	0.489	30.73	277
Jul 06	5,129	11,086	113,720	1,511,925	0.683	38.84	357	0.487	27.69	291
Aug 06	5,702	11,053	126,048	1,513,019	0.726	45.76	380	0.385	24.26	303
Sept 06	5,365	11,080	118,888	1,525,706	0.662	39.35	400	0.445	26.45	317
Oct 06	6,204	11,028	136,835	1,542,234	0.666	45.57	423	0.49	33.52	333
Nov 06	5,435	11,018	119,766	1,534,420	0.73	43.71	445	0.373	22.34	345
Dec 06	2,797	11,029	61,696	1,497,795	0.571	17.61	453	0.484	14.93	352
Jan 07	6,098	11,049	134,754	1,490,388	0.647	43.59	451	0.458	30.86	349
Feb 07	6,138	11,066	135,846	1,494,272	0.604	41.03	452	0.45	30.57	352
Mar 07	5,990	11,045	132,319	1,487,105	0.582	38.50	452	0.409	27.06	347
Apr 07	5,410	10,993	118,944	1,489,663	0.628	37.35	454	0.483	28.73	349
May 07	6,119	11,091	135,732	1,493,443	0.651	44.18	458	0.464	31.49	348
June 07	5,170	11,121	114,991	1,489,876	0.57	32.77	457	0.393	22.60	344
Jul 07	5,823	11,134	129,667	1,493,424	0.557	36.11	459	0.444	28.79	342
Aug 07	5,420	11,141	120,768	1,490,035	0.614	37.08	461	0.377	22.76	337
Sept 07	5,479	11,117	121,820	1,495,807	0.584	35.57	464	0.403	24.55	335
Oct 07	5,422	11,152	120,932	1,500,545	0.658	39.79	467	0.445	26.91	337
Nov 07	5,476	11,223	122,914	1,500,192	0.755	46.40	472	0.494	30.36	338
Dec 07	5,562	11,202	124,611	1,491,308	0.671	41.81	470	0.583	36.32	335
Jan 08	5,760	11,162	128,586	1,487,069	0.737	47.38	475	0.632	40.63	340
Feb 08	5,698	11,162	127,202	1,490,060	0.917	58.32	486	0.563	35.81	343
Mar 08	5,885	11,185	131,647	1,481,117	0.772	50.82	489	0.572	37.65	347
Apr 08	6,695	11,236	150,450	1,497,665	0.675	50.78	497	0.497	37.39	352
May 08	5,259	11,256	118,391	1,486,104	0.717	42.44	497	0.491	29.06	351
June 08	6,023	11,289	135,987	1,491,258	0.836	56.84	506	0.496	33.72	352
Jul 08	5,652	11,261	127,294	1,498,045	0.783	49.84	511	0.524	33.35	355
Aug 08	5,589	11,232	125,551	1,497,797	0.691	43.38	510	0.548	34.40	360
Sept 08	5,944	11,233	133,538	1,505,122	0.584	38.99	510	0.541	36.12	365
Oct 08	4,094	11,216	91,837	1,482,622	0.56	25.71	500	0.491	22.55	359
Nov 08	4,909	11,187	109,834	1,477,656	0.557	30.59	493	0.455	24.99	361

Company Name: Tate & Lyle Ingredients Americas LLC
Address City IN Zip: 2245 North Sagamore Parkway, Lafayette, IN 47904
Significant Source Mod No.: 157-34094-00003
Significant Permit Mod No.: 157-34105-00003
Reviewer: Ghassan Shalabi
Date: June 26, 2014

Dec 08	6,401	11,193	143,293	1,518,455	0.548	39.26	504	0.441	31.60	369
Jan 09	5,551	11,196	124,298	1,513,227	0.465	28.90	497	0.442	27.47	367
Feb 09	5,912	11,267	133,221	1,511,914	0.514	34.24	494	0.397	26.44	365
Mar 09	6,071	11,243	136,513	1,514,011	0.561	38.29	493	0.437	29.83	367
Apr 09	6,161	11,154	137,440	1,523,259	0.631	43.36	496	0.485	33.33	369
May 09	5,109	11,113	113,553	1,512,169	0.613	34.80	492	0.457	25.95	366
June 09	5,630	11,214	126,270	1,517,808	0.58	36.62	494	0.439	27.72	369
Jul 09	5,127	11,174	114,578	1,510,264	0.566	32.43	492	0.44	25.21	367
Aug 09	4,801	11,182	107,370	1,503,565	0.572	30.71	489	0.444	23.84	368
Sept 09	4,428	11,139	98,647	1,491,978	0.514	25.35	484	0.405	19.98	365
Oct 09	6,646	10,980	145,946	1,504,485	0.445	32.47	480	0.412	30.06	367
Nov 09	6,148	11,012	135,404	1,510,730	0.513	34.73	474	0.404	27.35	365
Dec 09	6,495	11,068	143,773	1,520,311	0.411	29.55	468	0.418	30.05	362
Jan 10	6,385	11,096	141,696	1,526,866	0.403	28.55	458	0.41	29.05	356
Feb 10	6,212	11,173	138,813	1,532,671	0.481	33.38	446	0.426	29.57	353
Mar 10	5,878	11,231	132,032	1,532,863	0.485	32.02	437	0.388	25.61	347
Apr 10	6,188	11,174	138,289	1,526,783	0.521	36.02	429	0.423	29.25	343
May 10	6,031	11,244	135,625	1,535,400	0.528	35.81	426	0.452	30.65	344
June 10	6,093	11,193	136,398	1,535,606	0.541	36.90	416	0.424	28.92	342
Jul 10	6,188	11,174	138,289	1,541,103	0.529	36.58	409	0.413	28.56	339
Aug 10	6,031	11,244	135,625	1,546,140	0.533	36.14	406	0.414	28.07	336
Sept 10	6,093	11,193	136,398	1,547,570	0.546	37.24	405	0.404	27.55	332
Oct 10	3,835	11,211	85,988	1,544,646	0.446	19.18	402	0.312	13.41	327
Nov 10	5,034	11,127	112,027	1,545,742	0.475	26.61	400	0.387	21.68	326
Dec 10	6,683	11,114	148,550	1,548,371	0.409	30.38	395	0.39	28.97	324
Jan 11	5,899	11,141	131,442	1,551,943	0.348	22.87	392	0.45	29.57	325
Feb 11	5,659	11,106	125,698	1,548,181	0.385	24.20	387	0.417	26.21	325
Mar 11	6,608	11,114	146,883	1,553,366	0.422	30.99	383	0.389	28.57	325
Apr 11	5,533	11,177	123,685	1,546,489	0.671	41.50	383	0.459	28.39	322
May 11	6,372	11,196	142,682	1,561,053	0.535	38.17	384	0.379	27.04	323
June 11	6,229	11,140	138,782	1,567,309	0.563	39.07	385	0.392	27.20	322
Jul 11	6,292	11,342	142,728	1,581,384	0.59	42.10	390	0.358	25.55	323
Aug 11	6,004	11,234	134,898	1,595,148	0.644	43.44	397	0.372	25.09	323
Sept 11	6,114	11,119	135,963	1,613,806	0.583	39.63	404	0.387	26.31	326
Oct 11	6,491	11,095	144,035	1,612,851	0.583	41.99	409	0.393	28.30	325
Nov 11	4,565	11,100	101,343	1,595,821	0.394	19.96	401	0.269	13.63	319
Dec 11	5,700	11,067	126,164	1,587,016	0.404	25.49	399	0.301	18.99	313
Jan 12	7,088	11,065	156,857	1,594,597	0.498	39.06	404	0.32	25.10	311
Feb 12	5,493	11,066	121,571	1,585,976	0.488	29.66	402	0.363	22.07	307
Mar 12	5,052	11,052	111,669	1,575,794	0.426	23.79	398	0.368	20.55	305
Apr 12	4,830	11,100	107,226	1,560,263	0.442	23.70	392	0.292	15.65	298
May 12	5,124	11,112	113,876	1,549,388	0.496	28.24	388	0.298	16.97	291
June 12	4,527	11,186	101,278	1,531,828	0.49	24.81	382	0.32	16.20	285
Jul 12	4,947	11,223	111,040	1,518,204	0.556	30.87	380	0.389	21.60	281
Aug 12	5,220	11,226	117,199	1,508,991	0.532	31.18	377	0.379	22.21	278
Sept 12	5,484	11,207	122,918	1,502,251	0.555	34.11	375	0.405	24.89	277
Oct 12	5,410	11,259	121,822	1,520,168	0.569	34.66	383	0.426	25.95	283
Nov 12	2,389	11,115	53,107	1,490,708	0.314	8.34	374	0.295	7.83	276
Dec 12	6,346	11,070	140,500	1,486,684	0.514	36.11	377	0.448	31.47	278
Maxima				1,613,806			511			369
Corresponding	72,325	11,158								
2011		11,153	1,594,301		0.510	409.40		0.381	304.85	
2012		11,140	1,379,066		0.490	344.52		0.359	250.49	
Average 11-12		11,146	1,486,684		0.500	376.96		0.370	277.67	

Company Name: Tate & Lyle Ingredients Americas LLC
Address City IN Zip: 2245 North Sagamore Parkway, Lafayette, IN 47904
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Reviewer: Ghassan Shalabi
Date: June 26, 2014

Belt Dryer System Shutdown Units Baseline Actual Emissions (BAE)

Data Element			Data Designation	Value		Reference/Calculation
Baseline Period				1/2011 - 12/2012		
Special Starch Belt Dryer (16D5)						
16F27 Scrubber						
	Operating Hours		[A]	7,235	hrs/yr	= Annual average hours of operation
	Scrubber Exhaust Air Flow		[B]	31,500	acfm	Design value
	Scrubber Exhaust Loading		[C]	0.0094	gr/acf	MRI test data summary for Starch Manufacturing Industry; 9/29/94. Average of test data for belt dryer with waste heat recovery = 0.010 gr/dscf, converted to gr/acf
	PM2.5 / PM10 Ratio		[D]	0.66092		Ratio for SCC 30201401
	Emissions					
		PM	[E]	9.18	tons/yr	= [C] * [B] * 60 min/hr * [A] / 7,000 gr/lb / 2,000 lb/ton
		PM10	[F]	9.18	tons/yr	= [E]
		PM2.5	[G]	6.07	tons/yr	= [F] * [D]
17F29 Scrubber						
	Operating Hours		[H]	7,293	hrs/yr	= Annual average hours of operation
	Scrubber Exhaust Air Flow		[I]	16,800	acfm	Design value
	Scrubber Exhaust Loading		[J]	0.0094	gr/acf	MRI test data summary for Starch Manufacturing Industry; 9/29/94. Average of test data for belt dryer with waste heat recovery = 0.010 gr/dscf, converted to gr/acf
	PM2.5 / PM10 Ratio		[K]	0.66092		Ratio for SCC 30201401
	Emissions					
		PM	[L]	4.94	tons/yr	= [J] * [I] * 60 min/hr * [H] / 7,000 gr/lb / 2,000 lb/ton
		PM10	[M]	4.94	tons/yr	= [L]
		PM2.5	[N]	3.26	tons/yr	= [M] * [K]
Belts Product Conveying mill Product to Bins 1, 2, 3 (7F25)						
	Operating Hours		[O]	7,235	hrs/yr	= Annual average hours of operation
	Bin Vent Air Flow		[P]	300	acfm	Design value
	Bin Vent Exhaust Loading		[Q]	0.005	gr/acf	No test data available; design = 0.01 gr/scf; conservativley assume 0.005 gr/adf
	PM2.5 / PM10 Ratio		[R]	0.54762		Ratio for SCC 30201401
	Emissions					
		PM	[S]	0.05	tons/yr	= [Q] * [P] * 60 min/hr * [O] / 7,000 gr/lb / 2,000 lb/ton
		PM10	[T]	0.05	tons/yr	= [S]
		PM2.5	[U]	0.03	tons/yr	= [T] * [R]
Product Bin #1 (7V50)						
	Operating Hours		[V]	7,235	hrs/yr	= Annual average hours of operation
	Bin Vent Air Flow		[W]	750	acfm	Design value
	Bin Vent Exhaust Loading		[X]	0.005	gr/acf	No test data available; design = 0.01 gr/scf; conservativley assume 0.005 gr/adf
	PM2.5 / PM10 Ratio		[Y]	0.54762		Ratio for SCC 30201401
	Emissions					
		PM	[Z]	0.12	tons/yr	= [X] * [W] * 60 min/hr x [V] / 7,000 gr/lb / 2,000 lb/ton
		PM10	[AA]	0.12	tons/yr	= [Z]
		PM2.5	[BB]	0.06	tons/yr	= [AA] * [Y]
Product Bin #2 (7V49)						
	Operating Hours		[CC]	7,235	hrs/yr	= Annual average hours of operation
	Bin Vent Air Flow		[DD]	750	acfm	Design value
	Bin Vent Exhaust Loading		[EE]	0.005	gr/acf	No test data available; design = 0.01 gr/scf; conservativley assume 0.005 gr/adf
	PM2.5 / PM10 Ratio		[FF]	0.54762		Ratio for SCC 30201401
	Emissions					
		PM	[GG]	0.12	tons/yr	= [EE] * [DD] * 60 min/hr * [CC] / 7,000 gr/lb / 2,000 lb/ton
		PM10	[HH]	0.12	tons/yr	= [GG]
		PM2.5	[II]	0.06	tons/yr	= [HH] * [FF]
Total Emissions						
	PM			14.40	tons/yr	
	PM10			14.40	tons/yr	
	PM2.5			9.48	tons/yr	

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

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Richard L Dickinson
Tate & Lyle Ingredients Americas LLC
2200 East Eldorado Street
Decatur, IL 62525

DATE: September 26, 2014

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

SUBJECT: Final Decision
Title V - Significant Source Modification
157 - 34094 - 00003

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Kevin J Niebrugge, Plant Manager
Pete Keller RTP Environmental Associates, Inc.
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 6/13/2013

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

September 26, 2014

TO: Tippecanoe County Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Tate & Lyle Ingredients Americas LLC
Permit Number: 157 - 34094 - 00003

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 6/13/2013

Mail Code 61-53

IDEM Staff	LPOGOST 9/26/2014 Tate & Lyle Ingredients Americas LLC 157 - 34094 - 00003 /final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

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		Richard L Dickinson Tate & Lyle Ingredients Americas LLC (North Plant) 2200 East Eldorado Street Decatur IL 62525 (Source CAATS) Via confirmed delivery									
2		Kevin J Niebrugge Plant Manager Tate & Lyle Ingredients Americas LLC (North Plant) 2245 North Sagamore Parkway Lafayette IN 47902 *(RO CAATS)*									
3		Mr. Elliott McKinnis 2605 Yeager Road W. Lafayette IN 47906 *(Affected Party)*									
4		Mr. Dan Altepeter 1161 E 430 S Lafayette IN 47909 *(Affected Party)*									
5		Ms. Linda Foster 3336 Ingram Ct Lafayette IN 47909 *(Affected Party)*									
6		Mr. John Cooper 3032 Ute Ln Lafayette IN 47909 *(Affected Party)*									
7		Tippecanoe County Commissioners 20 N 3rd St, County Office Building Lafayette IN 47901 *(Local Official)*									
8		Lafayette Fire Department 443 North 4th Street Lafayette IN 47901 *(Affected Party)*									
9		Tippecanoe County Health Department 20 N. 3rd St Lafayette IN 47901-1211 *(Health Department)*									
10		Lafayette City Council and Mayors Office 20 North 6th Street Lafayette IN 47901-1411 *(Local Official)*									
11		Tippecanoe County Public Library 627 South Street Lafayette IN 47901-1470 *(Library)*									
12		Mr. Richard Hines P.O. Box 180 Lafayette IN 47902 *(Affected Party)*									
13		Mr. Robert Dexter 2158 Ulen Ln Lafayette IN 47904-1623 (Affected Party)									
14		Ms. Geneva Werner 3212 Longlois Drive Lafayette IN 47904-1718 *(Affected Party)*									
15		Ms. Denice Loveless 1319 North 15th Street Lafayette IN 47904-2115 *(Affected Party)*									

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.

FACSIMILIE OF PS Form 3877

Mail Code 61-53

IDEM Staff	LPOGOST 9/26/2014 Tate & Lyle Ingredients Americas LLC (North Plant) 34094 (draft/final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

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		Charles 700 N. 28th St. Lafayette IN 47904-2705 (Affected Party)									
2		Mr. James Burkett 1115 E Evans St Springfield MO 65810-2926 *(Affected Party)*									
3		Mr. Robert Laird 2005 Platte Dr. Lafayette IN 47905 *(Affected Party)*									
4		Mr. Wendell Wiley 112 Peppertree Ct. Lafayette IN 47905 *(Affected Party)*									
5		Ms. Sarah Templin Vinton Woods Club 3516 Mulberry Dr. Lafayette IN 47905 *(Affected Party)*									
6		Mr. Charles Craw 3624 Cypress Lane Lafayette IN 47905 *(Affected Party)*									
7		City Council Representative, District 4 1227 Catula Ave. Lafayette IN 47905 *(Affected Party)*									
8		Mr. John Gladden 2413 Natalie Lane Lafayette IN 47905 *(Affected Party)*									
9		Mr. Jake Blair 3481 US 52 S Lafayette IN 47905 *(Affected Party)*									
10		Mr. Roy Borden 146 Bordequx Boulevard Lafayette IN 47905 *(Affected Party)*									
11		Ms. Evelyn Briggs 213 Fairington Ct, Apt 19 Lafayette IN 47905-4821 *(Affected Party)*									
12		Ms. Deborah Deel 112 Bordeaux Boulevard Lafayette IN 47905 *(Affected Party)*									
13		Ms. Kathleen Dirosaria 1502 Virginia Street Lafayette IN 47905 (Affected Party)									
14		Ms. Cheryl Hartman 148 Bordeaux Boulevard Lafayette IN 47905 *(Affected Party)*									
15		Ms. Norma Kessen 2513 Shasta Dr Lafayette IN 47909 *(Affected Party)*									

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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Mail Code 61-53

IDEM Staff	LPOGOST 9/26/2014 Tate & Lyle Ingredients Americas LLC (North Plant) 34094 (draft/final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

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		Richard 109 Bordeaux Boulevard Lafayette IN 47905 (Affected Party)									
2		Ms. Scarlett Manion P.O. Box 6592 Lafayette IN 47903 *(Affected Party)*									
3		Ms. Donna Patton 13 Rene Blvd Lafayette IN 47905 *(Affected Party)*									
4		A. G. Vangordon 158 Bordeaux Lafayette IN 47905 *(Affected Party)*									
5		Ms. Dianna Velter 88 Deveraux Circle Lafayette IN 47905 *(Affected Party)*									
6		Sanctuary Homeowners 3511 Pintail Drive Lafayette IN 47905 *(Affected Party)*									
7		Mary Ann and Bruce Junius 1625 Cottonwood Cr. Lafayette IN 47905 *(Affected Party)*									
8		Ms. Vickie Richardson 2726 Vinton St. Lafayette IN 47904-1761 *(Affected Party)*									
9		Mr. Michael Smith 1824 Arcadia Drive Lafayette IN 47905 *(Affected Party)*									
10		Mr. Howard Helfrich 1517 W Hawkes St, Unit 1 Arlington Heights IL 60004-7478 *(Affected Party)*									
11		Mrs. Phyllis Owens 3600 Cypress Lane Lafayette IN 47905 *(Affected Party)*									
12		Ms. Connie Wagner 803 Greenwich Road Lafayette IN 47905-4324 *(Affected Party)*									
13		Ms. Jennifer Schramm 3614 E. County Road 200 N. Lafayette IN 47905-7852 (Affected Party)									
14		Mr. Kevin Lynch 3614 E. County Road 200 N. Lafayette IN 47905-7852 *(Affected Party)*									
15		Mrs. Robin Mills Ridgeway 3614 East County Road 200 North Lafayette IN 47905-7852 *(Affected Party)*									

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1		Wendy 6830 S. 775 E. Lafayette IN 47905-9331 (Affected Party)									
2		Mr. Jim Holt 3408 Ingram Court Lafayette IN 47909-6380 *(Affected Party)*									
3		Mr. Stephen Swope C/O Ivy Tech State College 3101 S Creasy Ln Lafayette IN 47903 *(Affected Party)*									
4		Mr. Aaron Martin 311 Sylvia St West Lafayette IN 47906 *(Affected Party)*									
5		Mr. Dor Ben-Amotz 3275 W450 North West Lafayette IN 47906 *(Affected Party)*									
6		Mr. John Percifield 400 Overlook Dr. West Lafayette IN 47906 *(Affected Party)*									
7		Ms. Mary Blignant 5421 Hillside Lane West Lafayette IN 47906 *(Affected Party)*									
8		Mr. Jerry White 4317 Amesbury Drive West Lafayette IN 47906 *(Affected Party)*									
9		Ms. Meredith Richmond & Richard Fudge 106 Main St Battle Ground IN 47920 *(Affected Party)*									
10		Ms. Susan Mollenkope 2304 Wigeon Drive Lafayette IN 47905 *(Affected Party)*									
11		Ms. Rose Filley 5839 Lookout Drive West Lafayette IN 47906 *(Affected Party)*									
12		Ms. Sue Scott 2605 Yeager Rd West Lafayette IN 47906 *(Affected Party)*									
13		Mr. William Cramer 128 Seminole Drive West Lafayette IN 47906 (Affected Party)									
14		Emil Berndt 30 Merlin Ct Lafayette IN 47905-9689 *(Affected Party)*									
15		Ms. Debra Bruce 1816 Tanglewood Dr Lafayette IN 47905 *(Affected Party)*									

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1		Judy 1901 Tanglewood Dr Lafayette IN 47905 (Affected Party)									
2		Mrs. Rae Schnapp 315 1/2 W Oak St W. Lafayette IN 47906 *(Affected Party)*									
3		Mr. Robert Iden Dorothy Brunson 3827 Harry Ave Lafayette IN 47904 *(Affected Party)*									
4		Ms. Magie Read P.O. Box 248 Battle Ground IN 47920 *(Affected Party)*									
5		Ms. Trudi Wildfener 3575 Canterbury Lafayette IN 47909 *(Affected Party)*									
6		Ms. Cynthia Clawson 2778 Alexandria Ct Lafayette IN 47909 *(Affected Party)*									
7		M. Drummond 915 N Chauncey Ave West Lafayette IN 47906 *(Affected Party)*									
8		Ms. Nancy Morton 811 Carrolton Blvd West Lafayette IN 47906 *(Affected Party)*									
9		Mr. Roger Lipioli 677 N 36th Lafayette IN 47905 *(Affected Party)*									
10		Ms. Susan Lipioli 549 Jonathan Way Lafayette IN 47905 *(Affected Party)*									
11		Mr. Mark Linden 3602 Clover Ln Lafayette IN 47905 *(Affected Party)*									
12		Ms. Sharon Baumis 2233 Huron Rd West Lafayette IN 47906 *(Affected Party)*									
13		Karen & John Siemers 1900 Perrins St Lafayette IN 47904 (Affected Party)									
14		Ms. Tracy Walder 1937 Maple St Lafayette IN 47904 *(Affected Party)*									
15		Mr. Marvin Smith 2323 N 19th Lafayette IN 47904 *(Affected Party)*									

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1		Barbara 2204 N 20th Lafayette IN 47904 (Affected Party)									
2		Ms. Diane Fritschler 304 Meridian West Lafayette IN 47906 *(Affected Party)*									
3		Ms. Donna Stephan 122 Dehart St West Lafayette IN 47906 *(Affected Party)*									
4		Ms. Elizabeth Neil 206 Dehart St West Lafayette IN 47906 *(Affected Party)*									
5		Mr. Stan Alexander 705 N Chauncey St West Lafayette IN 47906 *(Affected Party)*									
6		Ms. Tracy Trice 2925 Wilshire Avenue West Lafayette IN 47906 *(Affected Party)*									
7		Ms. Star Brown 1725 Summit Dr West Lafayette IN 47906 *(Affected Party)*									
8		Ms. Susan Dunwoody 3449 Woodfield West Lafayette IN 47906 *(Affected Party)*									
9		Mr. Chuck Krousgrill 1306 Sunset West Lafayette IN 47906 *(Affected Party)*									
10		Ms. Debra Steiner 2110 S. 100 W. Lafayette IN 47909 *(Affected Party)*									
11		Mr. Ron Bailey 3638 Chancellor Way West Lafayette IN 47906 *(Affected Party)*									
12		Ms. Amredhe Datra 108 Spinning Wheel West Lafayette IN 47906 *(Affected Party)*									
13		Mr. Bill Mercier 2809 Covington St West Lafayette IN 47906 (Affected Party)									
14		Ms. Sue Owens 7572 Birkner Dr Kent OH 44240 *(Affected Party)*									
15		Lon & Lauretta Heide 40 Gregory Court Lafayette IN *(Affected Party)*									

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1		Brandt Senator PO Box 177 Buck Creek IN 47924 (Affected Party)									
2		Mr. Patrick Grimes 443 N 4th Street Lafayette IN *(Affected Party)*									
3		R.J. Beck 20 N. 3rd Street Lafayette IN *(Affected Party)*									
4		Mr. Marvin Wiederhold 2809 N. 400 West West Lafayette IN *(Affected Party)*									
5		Ms. Melissa Weast Williamson 2905 Beverly Lane Lafayette IN *(Affected Party)*									
6		Ed Chosnek 316 Ferry Street Lafayette IN 47904 *(Affected Party)*									
7		Vicki Sines 8625 E. 375 S. Lafayette IN 47905 *(Affected Party)*									
8		West Lafayette City Council and Mayors Office 609 W. Navajo West Lafayette IN 47906 *(Local Official)*									
9		Pete Keller RTP Environmental Associates, Inc. 304-A West Millbrook Road Raleigh NC 27069 *(Consultant)*									
10		Mr. Allen Hoffman 4740 Masons Ridge Rd. Lafayette IN 47909 *(Affected Party)*									
11											
12											
13											
14											
15											

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